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PART FIRST.

ORIGINAL COMMUNICATIONS.

ART. I.—*Elphantiasis Arabum of the right inferior extremity, successfully treated by Ligature of the Femoral Artery.* By J. M. CARNOCHAN, M. D., Professor of the Principles and Operations of Surgery in the New-York Medical College, Surgeon to the State Emigrants' Hospital, Opthalmic Surgeon to the same Institution, &c., &c. [With a plate.]

Elephantiasis Arabum, so called in contradistinction to Elephantiasis Græcorum, because its history was first described by Arabian authors, is a malady, the etiology and pathology of which are not definitively understood at the present day. The treatment also remains uncertain; and when the disease has existed for any length of time, it is generally looked upon as irremediable by any other means than amputation of the tissues, or of the member involved. This malady is not confined in its attacks to any particular part of the body; the vulva, the scrotum, and the inferior extremities are, however, the principal seats of the disease. When affecting the lower extremity, its peculiar form, which is somewhat like the clumsy

appearance of the elephant's leg, suggested the name of Elephantiasis.

Elephantiasis of the Arabs is said to be uncommon in Europe, and as respects this country, I am not aware of its occurrence endemically, in any part of it. Insulated cases, however, certainly do present themselves. Within the last three years, five marked cases have come under my observation; of these, in two instances, the malady showed itself in the scrotum, and, in the other three, the seat of the disease was in the inferior extremity. Four of these cases became developed in persons residing in different parts of the United States, one in New-York, one in Florida, one in Virginia, and one in the State of Pensylvania; the other case occurred in a patient who was a native of Ireland, and who imported the disease with him. These patients were all adult males, and the circumstances preceding the development of the disease in each case, were generally dissimilar; thus, in the cases where the inferior extremity was affected, the disease in one became manifested after an attack of paludal fever; in another also, after a febrile attack; and in the third, after the individual had been working for some time at an occupation requiring him to stand for hours with his legs immersed in water. In one of the two cases where the scrotum and integuments of the penis were affected, the elephantiasis was preceded by a scrotal hernia, and by an attack of syphilis, while the other was associated with, and preceded by, a large hydrocele of the tunica vaginalis testis.

Climate cannot be said to have exerted any influence, as the cases occurred in different localities. The accounts, however, related of this malady, will not allow us to doubt that it is met with in certain latitudes and localities, more frequently than in others. In the West Indies, some parts of Asia, and among the Arabs, it is found to exist endemically; but, although this fact is established, and points to the influence of climate, what that influence is, and how it operates, remains unaccounted for, with any degree of certainty. The enlargement of the thyroid gland, which occurs in certain parts of Europe and North America, is ascribed to the drinking of snow water, and of water impregnated with calcareous or earthy particles; while in the equatorial or tropical regions, the prevalence of elephantiasis is

attributed to the alternations of heat and cold. But these speculations, resting as they do upon no positive data, are extremely vague, and thus, both as regards the more frequent occurrence in certain localities, and as regards the difficulty of accounting for the influence of climate, elephantiasis and bronchocele, both hypertrophic conditions of the tissues, appear to have some analogy to each other.

The production of the disease has also been attributed to the obliteration of the veins of the member affected, and likewise to chronic inflammation, commencing at the dermoid structure, and extending, by contiguity of tissue, to the subcutaneous layers; but again, it must be remarked, that no fixed invariableness of antecedence has been observed. One fact which may have some bearing upon the etiology of elephantiasis, and to which I shall again presently allude, has been generally overlooked. I refer to the morbid condition and dilatation of the principal arterial trunk of the member affected. The disease has also been supposed to arise from frequent attacks of erysipelas; and as another cause, from sub-inflammation of the absorbent vessels and lymphatic glands.

Elephantiasis, as in two of the cases which came under my observation, is sometimes rapid in its accession or invasion, and, when occupying an extensive surface, the constitution participates in the local affection. The skin assumes an erysipelatous hue; the subcutaneous tissues become engorged, tumified, and tense; the course of the lymphatics, if the seat of the malady be on a limb, is marked by nodulated cords; and the glands of the groin or of the axilla may also become affected and enlarged; these various symptoms being ushered in by a deep-seated and violent pain in the region of the disease.

If the disease, after the acute stage, do not recede, the intumescence remains, although the other symptoms may subside for a time. Exacerbations recur at intervals varying in duration, and the enlargement of the tissues increases, until the structures invaded remain, as it were, stationary in their abnormal condition, imparting to the hand, when examined, a harsh, dense, pachydermatous sensation, and presenting to the

eye, in the most characteristic form of the disease, a rough, scaly, dusky-looking mass of deformity, well represented in the accompanying illustration.

If the disease progress no farther than has just been described, the enlargement of a limb, or of the scrotum, remains an insufferable encumbrance; while, in the uninterrupted progress of the disease, fœtid and incurable ulcerations may occur, abscesses may take place among the morbid tissues, and the internal organs may become deranged. The prognosis, consequently, must be unfavorable, when the disease has existed for some time, and assumed its characteristic, chronic and intractable form.

In the early stages of the disease, it is possible that it may be confounded, especially in females, in whom the subcutaneous strata are usually thicker than in males, with diffuse and deep-seated inflammation of the cellular tissue, or with œdema or anasarca. The history and progress of the disease, the sensation imparted, upon examination, by the tumor, and the peculiar local traits, generally suffice to enable the practitioner to discriminate, without much difficulty, between elephantiasis and the other diseases just named.

It would appear from the different accounts given of this disease, that the whole of the tissues of a member may become ultimately implicated. Some are primarily affected, while others, such as the bones, are probably not involved in the morbid degeneration, until the disease has been of long standing. The tissues primarily affected would seem to be the vascular; and the pain, redness, and hardness met with in the first stage of the disease, in the course of the lymphatic vessels, together with the appearances of the veins, upon autopsy, as mentioned by Bouillaud and others, evince with sufficient certainty a pathologic condition of the vessels. The arteries also participate in the disease, and very probably at an early stage of its invasion.

The skin generally shows early participation in the malady; most commonly the development of the initiatory stage is accompanied by some form of cutaneous affection, such as eczema, erysipelas, lichen, or ulceration. These affections occur, however, so frequently without any of the hard and bulky

intumescence characteristic of elephantiasis being manifested as a sequent, that it is reasonable to suppose they are accompaniments merely of disease of the deeper-seated tissues, especially of the vascular tissues upon which, in reality, the elephantiasis depends. The different strata of the skin are hypertrophied to a considerable degree, the epidermis presenting a series of dusky, hard, superimposed scales. This condition of the epidermis, however, is not always present, especially when the scrotum is the seat of the disease. The subcutaneous adipo-cellular layer is blended with the dermoid tissue, so as to form a hard, dense, and lardaceous mass of irregular thickness; the sub-aponeurotic and intermuscular cellular tissue becomes also changed and hypertrophied; the muscles, also, are in the progress of the disease perverted, becoming softened and less deeply colored than in their normal condition, sometimes being converted into fatty tissue, at others into an indurated formation, and even, at times, exhibiting deposits of bony material; the nerves are sometimes found to be increased in size; the bones are sometimes found unaltered, and sometimes are found increased in size; and, lastly, the interosseous ligament is at times found ossified. Lesions of the internal organs are not so frequently found to accompany elephantiasis Arabum as the other form, known as elephantiasis Græcorum; still, diseases of the internal viscera are seen as complications of the former, when the malady has existed for a long period.

In its initiatory stage, the treatment of elephantiasis, regarded as a *phlegmasia*, should be conducted upon antiphlogistic principles; thus bleeding, emollient applications, tepid baths, and the vapor *douche*, are recommended and resorted to. In the more chronic stages of the malady, compression, combined with scarifications and local bleeding, are said to be useful. Iodine frictions and the vapor douche appear to merit most attention, having, upon good authority, been used advantageously in cases of genuine elephantiasis.

When the disease has resisted every rational curative method, and when the part attacked has attained a size which, by reason of the weight of the mass, renders it an unmanageable encumbrance, as happens in elephantiasis of the scrotum and of the inferior extremities, amputation is advised and

practised as the only alternative. But this extreme resort is not usually attended with success, the disease generally returning upon some other member with all its original inveteracy and obstinacy.

In the following case which came under my management, I resorted to a method of treatment which, as far as I know, is entirely novel, and which, both for this reason and because it terminated in the perfect restoration of the diseased and cumbrous limb to its normal condition and functions, I have thought deserving of publicity.

The annexed drawing of the limb of the patient, taken from nature, gives an accurate representation of the disease.

CASE.—Charles Roller, of lymphatic temperament, and short stature, æt. 27, born in Aix-la-Chapelle—occupation, merchant, left his home in December, 1849, landed in New-York in February 1851, went thence to Connecticut, where for eight months he worked in a factory, standing during his hours of labor; thence went to Virginia, where he worked on a farm for about six months, at the expiration of which period he was taken with fever, of an intermittent character. Up to that time, he had always been in good health.

During the fever, the inguinal glands became swollen and painful; the swelling and pain extending in the course of the femoral vessels as far as the knee. The pain was followed by swelling and redness of the thigh down to the knee. From the knee, the pain and swelling continued to extend downwards as far as the toes; being, at this time confined chiefly to the portions of the limb along the course of the saphena vein, and also of the posterior tibial vessels. The redness and tumefaction here, as in the thigh, was preceded by deep-seated pain. The tumefaction of the limb continued to increase; while, at the same time, febrile exacerbations occurred at intervals, varying from two to six days. After a period of about six weeks from the commencement of the disease, the fever entirely disappeared, and by this time, also, the pain and redness had entirely ceased; the limb, however, remaining hard, swollen and rough, and presenting, in a marked degree, the peculiar characteristics of elephantiasis Arabum, in the chronic period of the disease.

From this time forward, the hardness and intumescence gradually increased, and the limb became so cumbersome, that the patient was obliged to give up all business, and confine himself chiefly to a recumbent posture. In this condition, the patient left Virginia for the purpose of seeking medical relief at the New-York Emigrants' Hospital, into which he was admitted the fifteenth of January, 1851. The appearance of the patient upon entering the Hospital was somewhat emaciated. He had no febrile symptoms, and the chief difficulty, under which he labored, arose from the enlarged and hypertrophied condition of the right inferior extremity.

The limb was enlarged from the toes to within a short distance below Poupart's ligament. The thigh, although enlarged, was not much indurated; while, from a short distance above the patella, downwards, the limb presented a dense, hypertrophied, hard, scaly, shapeless mass, the appearance of which will be best apprehended by referring to the accompanying plate.

The morbid condition of the tissues pervaded the foot and toes, there presenting groups of tuberculated growths. The circumference of the limb around the ankle, was nearly as large as that of the calf; measuring fifteen and one-half inches, while the circumference of the calf measured nineteen and one half inches.

The patient was put under treatment upon entering the Hospital. The recumbent posture was enjoined, and for some time various discutient lotions were used. Bandaging was resorted to, with frictions of ung. Potass. Iodid; the Iodide of Potassium being also prescribed internally.

At times, also, the limb was painted with strong tincture of Iodine; local and general baths were used, regular bandaging of the limb, from the toes upward, being the while carefully observed.

This plan of treatment was perseveringly adhered to from the fifteenth of January to the twenty-second of March, a period of a little over two months, without any amelioration. Having thus tried, without success, the method of treatment most approved of, I proposed to place a ligature upon the femoral artery, with a view of changing the morbid condition of the

structures supplied by the branches of this arterial trunk. A consultation was held, and my proposition was acceded to as preferable to amputation, the usual alternative resorted to in this stage and extent of the disease. Accordingly, on the twenty-second of March 1851, I secured the femoral artery, a short distance below the origin of the arteria profunda. Upon exposing the femoral artery, this arterial tube was found to be changed, so as to present an appearance somewhat like the color of the aorta of the ox, and to be larger than the common iliac of the human subject. In consequence of this appearance of the artery, after some hesitation, I applied the ligature, preferring to do this, rather than to expose the external iliac, of the soundness of which I could not be certain.

The ligature came away from the femoral artery on the eleventh day, accompanied by secondary hemorrhage, the occurrence of which I had expected as probable. For the purpose of arresting the hemorrhage, the *external* iliac artery was secured by ligature, by Dr. A. E. Hosack, who happened to be on duty at the time in the Hospital. The external iliac was found to be about the size of the brachial artery. This, for a time, apparently had some influence upon the hemorrhage; but on the following day, bleeding was again renewed from the orifice, in the femoral artery, with as much profusion as ever.

The hemorrhage was now restrained by the prompt application of a tourniquet, on the *cardiac* side of the bleeding orifice, by the house surgeons, Drs. Thompson and A. K. Smith.

This even failed to stop permanently the hemorrhage, and the blood recommenced oozing copiously at intervals. The patient was now sinking fast, and the ligature of the common iliac, or amputation at the hip-joint, appeared to be the only resources left. But the hemorrhage now being evidently reflux, it was suggested to apply the tourniquet, so as to produce compression on the *distal* side of the bleeding orifice: this was done, and was followed by a complete cessation of the bleeding.

From this time, (April fourth, 1851), the house surgeon kept an instructive record of the case, which record I have now before me. For several days, the pulse ranged from 115 to 108: the dressings were carefully attended to, and light diet prescribed. On the twelfth, the leg was found to be con-

siderably reduced in size, and the ligature of the external iliac, came away. On the seventeenth, brandy and quinine, with good nourishment, were ordered. On May the first, finding the leg still more reduced and the lower wound healed, I ordered tincture of iodine to be painted on the leg, and the bandage to be continued; I also ordered a solution of chloride of soda to be used as a wash on the upper wound, which continued to discharge freely.

The patient now went on gradually improving in strength and appearance, and left the Hospital in the latter part of June, completely cured of his malady. At this date, sixteen months after the ligature of the femoral artery, the patient is in robust health, and presents no indications that the disease will return.

ART. II.—*On Epidemic Typhus or Typhoid Fever as it appeared at and in the vicinity of Borodino, New-York, in the years* 1849, '50, *and* '51. By JONATHAN KNEELAND, M. D.

THE nature and essence of the actual producing cause of typhus or typhoid fevers I shall not attempt to describe. Nor shall I here discuss the question, whether these are ***distinct*** diseases, or only ***varieties*** of the same disease. But I shall state facts which have, for the most part, occurred in my own practice during the prevalence of this form or these forms of fever, within a circuit of nine miles, during the last three years. It may seem that city physicians engaged in a large practice, professors in our metropolitan medical schools, and hospital physicians, possess facilities for noting and accurately observing fever facts, not within the reach of the secluded country practitioners, and that to them, therefore, pertains the right, and upon them devolves the duty, of collecting and classifying our facts, and deducing therefrom opinions to guide our practice. But does not our very seclusion, and the fixed unvarying character of our population, furnish us facilities to note accurately the rise, progress, and termination of a disease, from the first individual attacked to the very last case of the kind which occurs in a given locality and season, not possibly within the reach of hospital or city practitioners?

In November, 1848, a young man aged twenty, residing in Borodino, a small country village in the southern part of the county of Onondaga, was seized with fever three weeks after his return from Fulton, Oswego county. He stated "that he staid over one night in a house where one person had shortly previous died of fever, and others had been and then were sick with the disease; and that it was not called the common fever (malarious or bilious) of that locality." He was moderately seized, and the disease progressed slowly, but without marked cerebral or abdominal symptoms, to a favorable convalescence, at the end of the fourth week from the time of the attack. In four weeks from his seizure, his father, mother, brother, sister, his attending physician, and a young man who boarded with them, every member of the family, were seized within twenty-four hours of each other, most of them on the same day.

I saw at different times during their illness, six of these cases, and from their attending physician learned still more than from personal observation. The cerebral disturbance, as evinced by night delirium, dulness of countenance, came on during the second or at the beginning of the third week, in most of them, more early in a few. Diarrhœa of yellow liquid stools obtained in most of them, but was under the control of remedies, and no hemorrhage occurred from bowels or elsewhere. Two deaths, which took place in the fourth week, were preceded by delirium, subsultus tendinum, sleeplessness, deafness, and coma. In one of the fatal cases, examination showed no marks of diseased action in the brain. The small intestine was red and thickened in patches, and the spleen enlarged to two or three times its normal size, and softened. No cases of fever originated from any of the eight cases, and there have been no cases of fever in the village since, more than three years.

Nearly simultaneous with the above cases occurred the following, similar in symptoms and nature, although of different origin.

On the 22d December, 1848, Mrs. A——, a married lady aged about twenty-eight years, was seized with chilliness, pain through the forehead and *eyeballs*, and in the back, and back of the neck, followed on the 23d by moderate reac-

tion, a slightly coated tongue, and some abdominal pain. As neither she nor her family had intercourse with the cases in Borodino, and lived more than two miles distant, I hesitated as to the nature and origin of the disease; but learned on inquiry that on the 24th and 25th of November, four weeks previous to her present attack, she had spent thirty-six hours with her sister, a Miss Wilson, who, during that time died with fever; and that three persons in the neighborhood of Miss W. had died of a disease called by the attending physician typhus fever; and that her sister had taken care of and nursed in the family where these deaths had a short time previously occurred. Mrs. A—— came home, a distance of twenty-six miles, and enjoyed good health during the four weeks which elapsed prior to her attack. The fever seemed nearly stationary, and no untoward symptoms arose until the fifteenth day, when cerebral symptoms, insomnia, tremors, volubility, and finally active delirium, made the case troublesome for ten days, followed by loss of memory and judgment; and during the next ten days she seemed like a child of two years old just beginning to talk and understand. At the end of five weeks convalescence was fairly established.

A young lady, aged twenty-one years, who attended Mrs. A. during the most severe part of her illness, was, on the 28th of January, 1849, four weeks from the time she entered the house, seized with fever, which progressed similarly, but with no *active* cerebral symptoms, to convalescence, which was not fully established before the end of the fifth week from the period of attack. No member of either family took the fever from these cases.

On the 1st of October, 1849, Mr. A—— W——, aged 38, of Navarino, a small village eight miles remote from the nearest of the above-mentioned cases, and who had had no intercourse or connection with any person or family infested with fever during the previous winter, was attacked with what proved to be fever of a typhoid character. Within two weeks his wife came down with the same fever. The disease displayed the characteristic features of cerebral disturbance, marked by confusion and dulness of the mind, night delirium, increase of severity during the second fourteen days, and

tedious convalescence, with mild abdominal symptoms, which marked that of the previous winter.

About the 15th of November, W.'s sister, living nine miles from him in one direction, his mother and sister four miles in another, and a sister and brother-in-law seven miles in a third direction, all within four days of each other, were seized with fever of a similar character, and had all been with him to watch and aid in nursing during the week, when his disease was at its acme, and came down with the disease in from three and a half to four weeks from that time. From them, and in two of the families where they were sick, five more cases originated, being seized in from three to five weeks afterwards.

A young man, living four miles distant, who went to A. W.'s (the first case mentioned above), to board and attend school, on the 10th of November, being after convalescence was fairly established in A. W.'s case, and had commenced in Mrs. W.'s case, was attacked with fever of a mild form, between the 25th and the 29th days after entering the family. He however kept about for nearly a week, then came home; soon became delirious; tongue red and dry; bowels tympanitic and painful. An *uncontrollable diarrhœa** came on, of dirty yellow watery stools; and he died at near the close of the fourth week from the time of attack. Two young men, one twenty and the other twelve years of age, who went from another neighborhood to labor for W., and were only in the house at meal time, and during one night, took the fever, and were moderately sick about the same length of time which the more severe cases lasted. To conclude the history of the fever as it appeared in the autumn of 1849, and the winter of

* By *uncontrollable diarrhœa* I mean here and subsequently, when using the term, that the lower bowels could not be calmed, the sphincter ani induced to contract, and peristaltic action prevented with any degree of certainty, or for any considerable length of time, by tannin and opium, acetas plumbi and opium, catechu and geranium given by the mouth, conjoined with enemata of starch and laudanum. In all cases in which these or other reliable means enabled us to control the bowels and prevent involuntary discharges (which in the fatal cases were often present), the term is not applied.

1850, there were nine cases in the immediate vicinity of Mr. W., all clearly traceable to his case, or that of his wife, as the *fons et origo mali.* In about twenty cases there were but three deaths; and one of those, it is generally thought, was caused by the injudicious and wholly mistaken notion, that the fever could *be broken up,* in its early stages, by lobelia emetics. It was currently reported that the patient died under the operation of an emetic, in the early stage of a mild attack of the disease. In another, the case mentioned above, the bowel lesion, which finally proved fatal, was probably much aggravated by his having swallowed several drastic hydragogue pills, which he had obtained *to break up the fever.*

In summing up the symptoms which marked these two distinct epidemics as briefly as possible; and at the same time so definitely as to aid the medical reader in arriving at correct conclusions as to their specific character, I will state that many of them were under my immediate care and inspection throughout the disease; and of the remainder, which were treated by neighboring practitioners, I saw a number of the more grave cases, at different times during their sickness, and therefore speak from personal knowledge. Chills or chilliness, followed or attended by headache and pains "all over," these pains diminishing, and generally ceasing within a week; thirst, heat of surface, pulse accelerated, and fever increasing at night; appetite and strength gone; dulness of mind; delirium at night, or on first waking, and the delirium increasing at or about the 15th day in many cases; jactitation; sleeplessness, or dozing subsultus; picking and reaching after unrealities; epistaxis in nearly half of the cases, some time in the second week; a dry, red, glossy, or slimy tongue, becoming dark and cracked in the course of the third week, in some cases, with sordes on the teeth; *deafness* in nearly half the cases, in some cases preceded for a few days by marked acuteness of hearing. Diarrhœa, of thin, dark, dirty, or ochery stools, in more than one-fifth of the cases, not easily controlled;—in those cases unaccompanied by diarrhœa the bowels easily moved by laxatives or enemata, tympanitic distension of, or tightness of the integuments over the abdomen, with gurgling on pressure

in the right iliac region. Bronchial or sibilant rales over the chest, in a few cases, which were casually observed during the second or third week; red, oval spots, scattered over the upper part of the abdomen, about the 12th to 15th day after the attack. Convalescence never occurred before the third, and often not until the fourth or fifth week after the onset of the disease; and death, in the fatal cases, was postponed to nearly the close of the fourth or into the 5th week. Such were the characteristic features of the disease, not all present in every case; but a majority, or a large moiety of them, were never entirely absent in any of the cases which occurred during either the epidemic or outbreak of 1848 and '49, or that of 1849–50.

In December, 1850, G. M——, a young man twenty-three years old, was attacked with fever, about three weeks after his return home from Michigan, where, in making a wedding-tour, he had spent some five weeks. He was not aware of having been exposed to fever, either in Michigan, or during his journey. The premonitory symptoms, as chilliness, headache, pain in the back and limbs, with fever at night, and diarrhœa, were not sufficient to keep him from work, and he drew wood five miles to market seven days after his appetite was gone, and the above symptoms were manifest. I was not called until the 10th day after he was seized with chilliness. Instead of "a hard cold," as he thought, his inexpressive look, red, glazed tongue, tympanitic abdomen, with gurgling or pressure over the right iliac region, *dark*, yellow, watery stools, and pungent heat of surface, told but too plainly that the frost of the two previous winters had again made its appearance. Neither the patient nor his family had been exposed to contact or intercourse with any of the families who suffered from fever during the two previous winters; they lived one mile and a half distant from the nearest case. His case may be stated as a fair sample of the more grave cases, which commenced with, and spread from him, as a starting point of contagion. Indifference to his own condition, somnolency and deafness slowly increased from the 10th to the 17th day, when the common answer to the inquiry, "How do you feel now?" would be, "well enough," or "good," or "first-rate;" at the same time,

the dusky hue of his countenance, which, just observable at first, increased, and gave to his cheeks, nose, and the lower part of his forehead, the appearance of having been burnt before a hot fire, only the color was darker. His knuckles, elbows, and nates, where the capillary circulation is feeble, manifested the same discoloration; while the parts so marked felt cold, the body gave out a pungent heat; his tongue became moist and slimy on the 15th day, and was covered with tenacious mucus until the last three days, when sordes appeared on lips, teeth, and tongue; his pulse was about 90 per minute in the morning, 110 at night, and soft until the last twenty-four hours, when it became *small, quick, sharp, and very rapid.* Suppression of urine came on upon the 18th day, and as he had had no previous strangury, urine of natural appearance had been freely voided throughout his illness; the brain, or its media of communication with the detrusor urinæ, must have been at fault. The catheter passed readily, and was used two or three times every twenty-four hours, up to the twenty-sixth day, when he died; his symptoms changing only in a gradual increase of deafness, increased sensibility of the skin, lividity of the face and other parts, becoming more dusky in hue, appearing sometimes on one side of the face, and again on the other, and then partially disappearing. On the twenty-fifth day, hemorrhage from the bowels occurred; consisting of copious stools of uncoagulable blood, mixed with dark fæcal matter, of a highly offensive cadaverous odor; the evacuations briny, preceded by paroxysms of abdominal anguish, with efforts to rise, and thrusting of the clenched fists into the abdomen; bronchial rales were heard over the chest, with an occasional hacking cough throughout the first fifteen days; but as the abdominal symptoms became more urgent, the cough for the most part disappeared. After the twenty-first day the heat of the surface kept below the standard of health. For twenty-four hours before hemorrhage occurred, he had the dicrotus or hemorrhagic pulse; and I observed this symptom also in two subsequent cases, fatal from hemorrhage, and in one case where hemorrhage from the womb occurred, but the patient recovered. I saw no petechial eruption on him at any time. Four days after his death, his

wife was seized with dizziness and fainting, followed by violent pain in head, back, and back of neck. I saw her four hours after seizure; found her eyes red, face turgid, pulse bounding, in short all the symptoms of high febrile excitement, dulness and confusion of mind, intolerance of light and noise. Her fever manifested for the first fourteen days marked remissions towards morning, with evening exacerbations of high excitement, attended with delirium, sleeplessness, and efforts to escape. On the fifteenth day she had the bisferiens, or dicrotus pulse, followed on the sixteenth by uterine hemorrhage; during the continuance of which an embryo (of six or seven weeks perhaps) was cast off. On the eighteenth, her febrile symptoms moderated, and towards the morning of the 19th, a gentle moisture appeared over the entire surface. Her mental faculties and speech seemed weakened, and about equal in power and distinctness to those of a child of three years of age, but slowly returned as the fever grew less, and appetite and strength returned. By the twenty-seventh day, she was free from fever, and fairly convalescent.

On the twenty-fourth of January, 1851, Mrs. M——, aged twenty-eight, a near neighbor of G. M., who had watched with him and often been in the house during his illness, was attacked with fever; she had no medical attendant during the first week, at the end of which time I found her with the characteristic symptoms of a low grade of the disease; feeling quite well each morning; headache, sleeplessness and fever at night. But neither in her case, nor Mrs. M——'s, mentioned above, was there much diarrhœa, the bowels being easily moved, and the stools like rhubarb and water, or yellow and ochery, with gurgling on pressure, and abdominal fulness, but not tympanitic. She grew worse after the fifteenth day, slight diarrhœa and severe cough came on; the cough continued until convalescence was fairly established, at the end of the sixth week; apathy and indifference to her condition were marked symptoms during the last two weeks, but there was no delirium; subsultus and tremor of the voice, with almost complete prostration of strength, attended through the third and part of the fourth weeks.

Mrs. M.——'s brother-in-law, aged twenty, who had

watched with G. M. the first case, was seized within three weeks from G. M.'s death, and four weeks from the time he watched, in an adjoining county some thirty miles distant; he came home, was moderately sick for eleven days, epistaxis then occurred, and was so very profuse, as to excite our alarm, after which he lay somnolent and indifferent for three weeks, and then slowly convalesced. G. M.'s mother aged sixty-four took the fever, and died in just four weeks from his decease, an old bronchitis having been fatally accelerated by the fever.

Mrs. B——, an old lady, aged seventy-two, who took care of old Mrs. M., and who (it was said) slept in the room, and in the bed where G. M. died; came down with the fever in twenty-four days after entering the house; lived twenty-nine days. An *uncontrollable diarrhœa* became a prominent symptom, the evacuations were at first of a dirty yellow color, afterwards darker, and finally of a dirty reddish brown color. Mrs. B.'s daughter, L. S., aged thirty-six, who nursed her mother almost solely, during her illness, was seized with fever, in just ten days after her mother's death, and died on the twenty-eighth day. E. P., a grandchild of Mrs. B., aged ten years, was seized four days before her aunt's death, and twenty-five days after her grandmother's death, and lived but four weeks. Diarrhœa and cough were prominent symptoms during the second fortnight in both these cases.

The mental apathy, so characteristic of grave cases, was present after the first week in these three cases in a marked degree, and in two of them deafness, amounting to almost total deprivation of that sense, towards the close of life; while the sense of touch, as evinced in the increased sensibility of the face, lips, and skin, was morbidly augmented. Oval red spots, large and few in number, appeared about the fifteenth day over the stomach in the case of L. S. J—— P——, the father of the child, was seized four days later than his daughter with *symptoms of fever*, accompanied by pleuro-pneumonia, urgent dyspnœa and copious expectoration of bloody froth; he was bled copiously, and rapidly brought under the influence of mercury; and after ten days, rapidly convalesced without cerebral symptoms.

It is worthy of remark, that this family lived in an old

house, built forty years ago of logs, where the filth of near half a century, in a state of decomposition, had filtered through the cracks of the loose floor, and converted into mud, had mingled with the surface water, which oozed up at every step; and lacked the necessaries of life: all the other cases in the two previous, and in the epidemic which I am now describing, having occurred in the abodes of comfort and plenty.

But let us return to the family mansion of G. M. where the fever first occurred; and trace it from one individnal to another, until the question of its communicability, or contagiousness, shall be definitely settled in the light of facts. S. W., a servant girl in the house where Mrs. M. the wife of G. M. was sick, took the fever in three weeks after washing the bedding and linen of the sick woman, had moderate typhoid symptoms lasting four weeks.

W—— P——, aged thirty-six, who nursed G. M. for ten days before his death, went to a neighboring town to work; and in three weeks after M.'s death, and about four weeks from the time he entered the house, was seized with fever of a low grade; and continued moderately sick until the commencement of the fourth week, when most profuse exhausting sweats came on, after which he slowly recovered. This man nursed throughout the two previous epidemics and escaped fever. Three weeks after G. M.'s death, his father, aged about seventy-two, was seized with fever, attended throughout with symptoms of unusual leniency; still the red tongue, diarrhœa with ochery stools, and tedious convalescence, left no doubt as to its nature.

In the house occupied by H. M. before described, about thirty rods distant from G. M.'s, there occurred between the twenty-fourth of January and the tenth of May, nine cases of fever, and three deaths, at intervals of from three to five weeks, except in three cases which were nearly simultaneous in their outbreak, and the first two cases above noticed, which were doubtless contracted during the last week of G. M.'s illness. Their respective ages were: twenty-eight, twenty, thirty-two, fifteen, seventy-two, seventy-five, sixty-three, seventy-five and twenty-four.

Of those who died, one aged seventy-five died on the thirty-sixth day, of ulceration of the colon, with perforation. She was

slowly convalescing; death took place suddenly. Another, aged thirty-two, died on the nineteenth day, of hemorrhage from bowels, without pain; a third died on the eighteenth day; ileum found extensively ulcerated, and more than one-half of the lungs, at their lower and back part, carnified, of a bluish red color; blood liquid; back, and lower side of the limbs, of a cadaverous purple, being filled with dissolved blood.

In one case only in this family, did I discover petechiæ, few in number, and small on the upper part of the abdomen, and during the third week, in the patient aged fifteen years. In seven of the nine fatal cases the livid, dusky discoloration of the cheeks, nose, ears, knuckles, &c., mentioned in describing G. M.'s case, were manifested about the fifteenth day or a few days later, and continued to appear, and partially (never wholly) disappear; sometimes being on one cheek, and the same ear, and side of the nose, and again fading there, and appearing on the other side. In no case where this appearance occurred about the fifteenth, and continued beyond the twenty-second day, did recovery take place. Another fact; the *mild* cases of the first fortnight oftener proved fatal at or before the end of the second fortnight, than those which were more severe at first. The young man aged twenty-four, in whom a post-mortem examination revealed terrible and extensive ulceration of the solitary, and agminate glands of the ileum, walked to consult me more than a mile, three days after his attack; and only complained of general languor, diarrhœa, and a *bad* feeling in his bowels, nor did he seem, to a casual observer, very sick until the twelfth day.

If the reader has had the patience to follow me thus far in my digressive and disjointed narration of facts, he will, I am confident, adopt one conclusion, at which I arrived during their occurrence, viz., that the disease we have had in this locality during the three past winters *was contagious*, and was in no case *caused* by filth, impure air, short rations, watching, severe toil, and mental depressing agencies; and surely I freely admit that these agencies may, and probably do, either singly or combined, increase the ratio of mortality in persons who have received the contagious influence; they may and doubtless do by their presence lower the vital energies to a succumb-

ing point, in persons having the contagious cause within their organism, and by their absence afford immunity to those who, after exposure, go about cheerful duties in pure uncontaminated air away from the sick-room.

But, says the objector to the contagious origin of these fevers, "Why do so many who are exposed escape?" As well might death or damage, by *coup de soleil*, be denied in *any* case, because *all* upon whom the hot sun shines are not affected by sun-stroke; as well may it be denied that death-dealing bullets flew at Buena Vista, because many soldiers escaped harm on that field of blood. Allow me to direct the reader's attention to the case of N—— M——, aged 20, and that of W—— T—— aged 36, who, having been exposed, went into *other localities*,* and came down with fever as near like that to which they had been exposed as one case of small pox is like another; together with that of W—— D——, aged 24, mentioned above as having died on the 18th day of intestinal ulceration, and who came from a healthy neighborhood to do farm work, only coming into the house at meal times and to sleep; one death occurring in the family about one week after his arrival, others slowly convalescing; in four weeks and three days after he came to the house, he was seized with the same fever: as calculated to aid in removing his doubts.

The importance of the question of contagion in its influence upon the welfare of the community, and the opinions and action of the medical profession, must be my apology for the tediousness of this article. The three epidemics had no causative connection with each other; the one was not a continuation of that which preceded, and were they not different diseases? They were as near alike in their general features, mode of access, and of convalescence, as any three distinct epidemics of scarlatina or small-pox; each had some features as to mildness or severity differing from the others, owing perhaps to different atmospheric or meteoric conditions. Head symptoms

* On careful inquiry, I learn that no fever of any kind either did or had for many months prevailed in the places where they were, when seized with fever, nor were there any cases of the disease afterwards in either locality.

were more constant, and delirium of a low, passive character was present in a larger proportion of the cases, during the first than during the second visitation of the disease, while the abdominal complication was more early present during its third appearance, while in this last and and most fatal return of the pestilence, delirium was often wanting until near the termination of even the most grave cases. The typhus or typhoid, as you please, eruptions, called petechiæ, were found not more than four or five times among the whole number of cases (more than fifty in all), which occurred during the three years, and when observed in different years resembled each other as nearly as those cases which were seen during the same year. In all those cases where lividity of parts of the face, knuckles, &c., appeared, the blood was not coagulable, or very feebly so; while diarrhœa was a prominent symptom, and death often occurred by hemorrhage or ulceration of the bowels, or both conjoined, as was proved by examination.

The treatment pursued may seem to the reader as essential to complete the history of these cases; and had this paper been finished before the third and most fatal epidemic, the course of medication that insured the restoration of nearly nine-tenths of our patients would, perhaps, meet his approval. But when he came to learn from the sequel, that the same disease, as it appeared a year later in the same locality (and that an uncommonly salubrious one), was treated for the most part by the same practitioners, and on the same therapeutic principles; and that this treatment, formerly so successful, was now followed by a ratio of mortality amounting to near forty per cent., his confidence in the treatment pursued might, and very likely would, be much diminished. Success *is* the test by which the merit of medical treatment is measured. The skill necessary to conduct mild cases of fever through to health, in those epidemics which are not marked by malignity, where generous reaction comes on, and the local complications are under remedial control, and where the disease tends toward a favorable termination, is but to maintain a masterly inactivity. Success here comes to crown us skilful, if we but watch and wait.

When in another epidemic of the same or a like disease,

our patients begin to die, almost before *they* know they are sick, and go on slowly but surely to death by the local accompaniments of the disease, over which remedies exert little or no control; we must support nature in her arduous labors, and by food easy of digestion, and wine or other stimulants, *try to keep the patient alive*, by aiding constitutional power, and husbanding his vital resources. To maintain the vital powers until the *morbid poison** is eliminated from his system by the outlets where it specifically seeks an exit, the glands of Peyer, the lack of fibrin in the liquefied blood, being temporarily supplied by the stimulating food and wine, until the determinate duration of the eliminative process which constitutes the disease is past, and the work of repairing the ulcerated bowels, and reforming the changed blood is complete, is the utmost that the physician must expect to do in aid of nature during the critical period of the disease, and a necessarily tedious convalescence.

If I might venture an opinion, as to treatment, in connection with the torpor of the capillary system, which is almost always present in severe cases, it would be, that opium, from its known tendency to obstruct the free circulation of the blood in the capillaries, is contra-indicated; and that opiate enemata for the diarrhœa, and morphine, or crude opium, or pulv. ipecac. comp., or even tinct. opii acetat. should not be given for restlessness, or insomnia, where lividity of parts of the face, evincing capillary torpor, appears. In three cases, where my patients were likely to die for want of sleep, although one was suffering great prostration and diarrhœa, I gave tartar emetic and laudanum, on the recommendation of Dr. Graves, of Dublin, with the most gratifying results. Is not the antimony in Graves' formula (*Graves' Clinical Lectures by Gerhard*) a corrective of the opium, chiefly by stimulating the fine blood-

* "Typhoid material," "materies morbi," which is formed in the blood by the infecting principle or agent, and which is (perhaps?) but a vastly augmented amount of that principle or agent formed during the period of incubation and access, from materials found plentifully in the blood of some persons and wanting in others, by which we may account for the unsusceptibility of some persons, and the infrequency of a second attack.

vessels? Another suggestion; mercurials of the milder kinds—hydrarg. cum creta, &c.,—seemed very serviceable in relieving the bronchial complications, and re-establishing the secretions of the pulmonary membrane, but aggravated, I think, the abdominal lesions. One fact I should have stated, that bed-sores occurred in but one case, and in three cases boils of a diffused base, and which discharged sanies rather than pus, ushered in and accompanied tedious convalescence.

I will state a little cluster of fever facts in conclusion. In July last, two and a half months after the occurrence of the last previous case of fever, E—— P——, living nearly a mile distant from the family of M——, where three died and six recovered, was seized with the same fever. His wife, who nursed him and his child, aged nearly three years, were attacked four and a half weeks after his seizure; his brother in three weeks; and his sister and mother, the one in seven weeks and the other in eight weeks from the time of his attack; all occupied the same house. E. P. and his wife had assisted in M.'s family during the fever, from two and a half to four months before, and he had been ill with headache and symptoms uncommon to him, at three different times, between his exposure in the spring, and his seizure in July. A lady, who had fever at M.'s, removed to P.'s in June, and took with her bedding, which had been used during the previous fever. Did P.'s disease lie *dormant* in the state of incubation, except three *ineffectual struggles* for the mastery all that time? or did he contract the disease of Mrs. M., or from her bedding, which had been thoroughly cleansed and aired? or was it spontaneously generated in his case by atmospheric vitiation, and by him communicated to the family? From the facts as developed and analyzed in my presence, I answer yes, to the first and last questions, and unequivocally no, to the second and third. The ages of the above patients were forty-one, three, twenty-four, nineteen, and sixty-two, which last, a female, died nine weeks after her attack, of scirrhus.

In conclusion; during the three epidemics, in fifty-two cases, twenty-nine were females and twenty-three were males; in twelve deaths, eight were females and four males; eight cases, three males and five females, were over sixty years

old; three cases were seventy years of age or over, all males; two deaths occurred in females over sixty years of age; two cases in children, one ten, the other three years old; all the remaining cases were between the ages of fifteen and forty-five, and nearly two-thirds of them between twenty and thirty. Five cases appeared in the summer; three in the spring; thirteen in autumn, after cold weather commenced, and more than thirty in winter. Until the last epidemic no person was attacked with fever after the winter broke. No other form of prevailing disease occurred in either of the localities while the fever prevailed, and acute rheumatism, and inflammation of the lungs, which are very common over these high hills during the winter months, were banished until the fever declined each year. Myself and many exposed persons who escaped fever, had many of the characteristic symptoms which often preceded, and ushered in an attack, during each of the three winters. In no case was the fever broken up, however, after being formed, i. e. after chills, or chilliness, followed by fever and the characteristic pains in eyeballs, back of neck, &c.

The case of J. P—— was not a case of fever, but clearly a local inflammation, which called for, and got treatment that no sane man would have dared to pursue in a disease of diminished vitality, such as these fevers almost invariably wore. I did intend to describe minutely the living symptoms, and the post-mortem appearance in the cases of B. C——, Mrs. N——, and W. D——, but must reserve this task for a future occasion.

ART. III.—*Statistics of the Operation of Amputation at the Hip-Joint.* BY STEPHEN SMITH, M. D.

WHILE engaged recently in collecting some of the statistics in relation to amputation at the knee-joint, I directed my attention also to the same operation when performed at other large articulations. It was not until I had nearly completed the collection of the published cases of amputation at the hip-joint, that I had an opportunity of consulting the Memoir of Mr. Sands Cox upon the same subject, and there learned for the first, that this gentleman had made a similar collection for a

somewhat similar purpose. Here my labors would have ceased, but for the reflection that this collection contained some errors, that it has now been published several years, during which several cases have been reported, but principally that its foreign and expensive form of publication almost wholly excludes it from the profession in this country. I am chiefly indebted to this Memoir for reference to several cases, and for the date at which some operations were performed.

Amputation at the hip-joint was first noticed by the elder Morand, and subsequently brought prominently before the Academy of Surgery of Paris, by his students, Wholer and Pacthod, as early as 1739. In 1743, Ravaton proposed to perform this operation on a person suffering from a gun-shot wound of the thigh, but was overruled by his colleagues; in 1748, La Croix disarticulated the femur at the hip-joint, at the Hotel Dieu d'Orleans, for the first time in the history of modern surgery. In this case, the thigh was separated at its coxo-femoral articulation by gangrene, except the round ligament and sciatic nerve, requiring only that these should be divided with scissors to complete the operation. This patient went on favorably for several days, but fever supervening, he died on the fifteenth day. Barbet, whose essay received the prize offered by the Academy of Surgery in 1759, in regard to the propriety of this operation, founded his opinion in favor of it, in some degree upon this case. The second recorded case, and the first which proved successful, was performed by Perrault, of St. Maure, Tourraine, in 1773.* This was also a case of gangrene, extending nearly to the pelvis. In the following year Kerr, of Northampton, performed this operation, for the first time in England. About the same time, Mr. H. Thompson of the London Hospital, is supposed to have amputated at the hip-joint, but nothing satisfactory can be learned either in regard to the date or result of the operation. It is from the uncertainty of this case, that early English writers have asserted that this operation was first performed in England, and S. Cooper, (*Dict. of Surg. Art. Amput.*) labored under the

* SABATIER, *Médecine Operatoire*, t. iv. p. 542. *Medical and Physical Commentaries*, vol. iv.

still greater mistake of supposing that Kerr's case was the second ever performed. Mr. South has given due credit to the French operations.*

Previously to 1800, this operation had been performed fifteen times, of which six were reported as successful; the recoveries to the deaths being as two to three, or a mortality of sixty per cent. Of these fifteen cases, all but two were performed by French surgeons; excluding the two English cases, both of which were unsuccessful, and the ratio of recoveries to the deaths stands as six to seven, or a mortality of nearly fifty-four per cent. In two-thirds of these examples the operation was performed in military practice, four proving successful to six fatal. These results had the effect to direct attention strongly to the operation, and during the twenty years subsequently to 1800, it became of much more frequent occurrence, although the ratio of mortality was very considerably increased. During this period there were performed twenty-four operations, of which eighteen proved fatal, giving a mortality of seventy-five per cent. Of this number six occurred in continental practice, having a ratio of recoveries to deaths of one to five, or a mortality of over eighty-two per cent; seventeen occurred in English practice, of which four were successful; giving a mortality of over seventy-six per cent. The remaining one case was contributed by this country, and was successful. The operator was Dr. Walter Brashear, then of Kentucky, but recently of New Orleans; this was the first case of amputation at the hip-joint performed in this country, and has the additional merit of being successful.

During the next twenty years, ending with 1839, there are reported forty-two cases, of which twenty-nine were fatal, eleven successful, and two doubtful; admitting the doubtful among the fatal, and they give a mortality of nearly seventy-four per cent. The mortality of the operations on the Continent for this period, was over eighty-three per cent.; in British practice about fifty-four and one-half per cent., and in this country fifty per cent. American practice contributed two cases, one successful, and one fatal.

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* SOUTH'S CHELIUS, vol. iv.

During the last twelve years, the number of operations reported is twenty-one, of which eighteen were successful and three fatal, being a mortality of a little over fourteen per cent. For this period Continental practice contributes seven operations, all successful; British practice seven operations, and six successful; American practice, eight operations, and six successful.

In reviewing the history of this operation thus briefly sketched, it will be seen that the per centage of mortality has not gradually diminished from the earliest introduction of the operation, but quite abruptly. Thus for the twelve years previously to 1840, there were twenty-nine cases reported, of which six were successful, and twenty-three fatal, being a mortality of over seventy-nine per cent.; while for the twelve years subsequently to that date, as already noticed, the mortality was reduced to but fourteen per cent. It is difficult to account for this feature in the history of the operation, except in a general way; for the ratio of accidents and injuries to chronic diseases of the thigh, remains nearly the same in both periods. We may suspect, however, that the cases were better selected, that the operation was more skilfully executed, and above all, that much is due to the employment of anæsthetics.

It does not enter into the design of this paper to discuss the merits of the different methods adopted to perform the operation; but it may not be uninteresting to some, in this connection, to allude to them in a general way. They are, for the most part, but modifications of the three operations which have been practised in amputation in the continuity of the thigh, viz., *the flap*, *the circular*, and *the oval.* The *flap* may be *single* or *double;* when single it may be *posterior*, *anterior*, *internal*, or *external;* when double they may be *anterior and posterior* or *internal and external.* The *circular* operation was first introduced by Abernethy, and has been adopted by several eminent surgeons, but in no instance where it has been followed has the case terminated successfully. Professor Brainard is the only operator in this country who has adopted this method, so far as the history of the several operations have been given, and his case terminated fatally, after repeated hemorrhages, in about six weeks subsequently to the opera-

tion. The *oval* method, deduced by Scoutetten from Guthrie's operation, which was a combination of the double flap and oval, has been but rarely practised on the living subject. According to Velpeau, M. Baudens adopted it in his successful case, but it is elsewhere differently reported. These three principal operations and their divisions and subdivisions, have been still farther modified by successive operators, until the whole forms a chapter of tedious and uninstructive minutiæ, in regard to an operation which admits of so few important variations.

Of these several methods, that of the double flap has been much the most frequently practised, formerly with internal and external, but latterly with anterior and posterior flaps. It may be said of this operation, although no test of its merit, that in all the successful cases where the details of the operation have been given, this method has, with a single exception, been followed. The plan of placing a ligature around the femoral artery before proceeding to the amputation, once considered very essential, is now abandoned for compression. But, doubtless, the most important improvement, and that which will tend more strongly than all others to reduce the mortality of this, as of all severe operations, is the introduction of anæsthetics into surgical practice. The first case in which they were employed in amputation at the hip-joint was that of M. Hénot, in 1847, which was successful, the patient having inhaled ether. M. Guersant first used chloroform, and with the most favorable results; more recently it has been employed by Mr. Wigstrom and Drs. Van Buren and Bradbury in their successful cases. Dr. May made use of chloric ether in his operation with similar success.

The improvements in this operation, which have been suggested by American as well as foreign operators, are based upon the opinion of Mr. Guthrie, "that the success of the operation depends very much upon the quickness with which it is performed, not on account of hemorrhage, but to avoid the shock the constitution receives from the continued exposure and irritation of so large a surface in the immediate vicinity of the trunk of the body."* Dr. Mott modified Larrey's

* GUTHRIE'S *Treatise on Gun-Shot Wounds*, p. 364, 3d edit. Lond. 1827.

method by cutting from without inwards in making the external flap. Ashmead, of Philadelphia, slightly modified the operations of Plantade and Manec, the double flap method, the flaps being made anteriorly and posteriorly.

Dr. Van Buren describes his method as "nothing more than a modification of Liston's operation with anterior-posterior flaps, in which the posterior flap is made by cutting from without inwards towards the bone, instead of in the opposite direction, the disarticulation of the thigh being left to the last." He believes, "from repeated trials, that this operation could be invariably done in less than a minute by the most unpractised hand at all accustomed to surgical operations, and by a little practice in less than half the time mentioned, as was the case with my patient." Dr. Mott, who was present at the operation, expressed an opinion favorable to the method adopted. The operation here ascribed to Mr. Liston is that of Bèlard's.

Professor May remarks of his operation, "that which I selected was the double flap operation (the anterior and posterior flap), as recommended by Bèlard, with a slight modification of my own, viz., that of introducing the knife at the inside just above the tuberosity of the ischium, instead of at the outside, below the spinous process of the ilium." He prefers this method "from the facility and security with which the hemorrhage can be commanded;" and because "this operation can be performed with greater celerity than by any other mode of amputating at the hip joint." The extent of surface divided is so great, and the vessels (independent of the femoral) so numerous, that any delay or bungling in the operation might and probably would compromise the life of the patient. I have no doubt that it has happened more than once, that he has died on the table from hemorrhage, when the shock to the system has been made to bear the blame."

Dr. Bradbury operated according to the same method as above given, but modified in the following manner: "When about to form the posterior flap, it was observed that the great enlargement of the limb, the indurated and consolidated condition of the tissues to near the base of the first incision, would constitute a barrier to the introduction and passage of the

knife around the femur, so as to embrace all the remaining tissues, and give the flaps the dimensions desired. The knife was, therefore, introduced in nearly a perpendicular direction, on the external side of the bone, and carried out posteriorly, splitting the posterior flap in the middle; then in like manner on the inside of the bone, making three flaps, the two last of nearly equal size, an external lateral flap, a posterior and an anterior." This method furnishes a very pending and accessible channel for the exit of the ligatures and secretions. The greater flexibility of the flaps favored a more perfect coaptation to each other, and to the cavity of the acetabulum, leaving less space to be filled by granulations, and consequently was more favorable to union by the first intention; and, again, it is accomplished with great facility. A more perfect adaptation of parts, or a more symmetrical stump, it is not easy to conceive."

If we may be allowed to venture an opinion, from an attentive consideration of the facts here presented, we should say that "*quickness*" in the performance of this operation, as a point to be studied, is as ill-advised as it would be in any other severe and dangerous operation in surgery. The dangers from hemorrhage certainly have no existence in practice; on the contrary, in two cases at least, in which there was a troublesome oozing of blood, the wound was exposed to the air for some time, as in other amputations, with the effect to stop the bleeding and dry the wound. Mr. Guthrie, by a slight mis-quotation of the above extract from his work, has been made to advise a quick operation from the fear of hemorrhage. Such is not, however, the opinion of that surgeon; and he elsewhere states very positively, that "the danger arising from loss of blood is proved to be trifling, and no bad consequence has ever resulted from it." The second reason, that a "quick" operation will obviate the danger from a shock to the system, is not less tenable; for, in the first place, as these cases sufficiently attest, patients very rarely indeed die of the primary effects of the operation, but remotely from an extension of the disease, or some complication foreign to the operation; and, secondly, in at least three of the most successful cases the operation was purposely prolonged, in one

to check hemorrhage if it should occur, and in the other two to stop the oozing by exposure of the wound to the air. The congratulations of the friends of Mr. Syme on the celerity with which he first disarticulated the thigh, compared with the slow operation of Sir Astley Cooper, must have been turned to bitter irony when he compared the fatal result in his own with the successful issue in Sir Astley's case. Mr. Guthrie, who first gave currency to the opinion from which we here dissent, remarks, "the shock to the constitution or system at large, although undeniably great, has been proved not to be beyond its powers of supporting." A reviewer in the Dublin Quarterly Journal believes that the cause of death in amputation at the hip-joint, is neither the loss of blood by hemorrhage or the shock to the system, because death usually follows the operation too remotely; "but the abstracting so much in the limb, being one-fourth or fifth of the entire blood in the body, while the viscera still continue to act as though none were removed." As we discover among the causes of death in no instance the tardiness with which the operation was performed, although this is a marked feature in several cases of recovery, we must conclude that the rule still has universal application in operative surgery, "whatever is well done, is quickly done."

AMPUTATIONS IN

SEX.	AGE.	DISEASE OR ACCIDENT.	CONDITION.	DATE AND RESULT.
1. M.	14.	Gangrene of both lower limbs from eating diseased rye.	Suppuration had disarticulated right thigh except the round ligament and sciatic nerve.	1748. Died.
2. M.	21.	Right thigh crushed between pole of carriage and wall.	Gangrene and sloughing to a frightful extent, and thigh nearly disarticulated.	1773. Cured.
3.		Gun-shot wound and fracture of the femur.		1793. Died on third day.
4. M.		Compound fracture of thigh from a gun-shot.		1794. Cured.
5. M.		Compound fracture of thigh from a gun-shot.		1794. Cured.
6. M.				1794. Died on 58th day.
7. M.		Compound fracture of thigh from a gun-shot.		1798. Cured.
8. F.	18.			1798. Cured.
9. M.		Fracture of the femur from the bursting of a bomb-shell.		1799. Died.
10. M.		Fracture of femur and severe injury of right thigh from bursting of a bomb-shell.	Femoral artery was torn, and he lost considerable blood.	1799. Died on 7th day.
11. M.	20.	Right thigh carried away at its middle by a splinter of a bomb-shell.	Fracture of femur, extended as far as joint; soft parts bruised and disorganized; in extreme pain.	1799. Died.
12. M.		Very extensive gun-shot wound of thigh with fracture of bone to trochanter.	Suffered severe pain; begged to have the operation performed.	1809. Died in 3 hours.
13. M.		Same injuries as number 12.	Symptoms and condition as number 12.	1809. Died in several hours.
14. F.	7.	Tumor of the thigh.	Patient scrofulous; tumor very large and painful.	1812. Cured.

CONTINENTAL PRACTICE.

OPERATION.	REMARKS.	AUTHORITY.
Separated the attachments with scissors.	Four days after, amputated the left thigh, did well to tenth day, fever set in, she died on the fifteenth day.	LA CROIX. *Sabatier, Mèd. Op.*, tom. iv., p. 672.
	Convalesced without any unfavorable symptoms; seen twenty years after.	M. PERAULT. *Sabatier Mèd. Op.*, tom. iv., p. 672.
Lateral flaps.	Operation performed without accident, relieved; had to undergo a journey of twenty-four hours in winter, which proved fatal.	M. LARREY. *Mem. of Military Surgery*, vol. ii.
Lateral flaps.		M. BLANDIN. *Mott's Velpeau*, vol. ii. p. 638.
		M. BLANDIN. Ditto.
		M. BLANDIN. Ditto.
		M. PERRET. *Mott's Velpeau*, vol. ii., p. 638.
		M. MULDER. *Cyclop. Pract. Surg.*, part iv., p. 182.
Lateral flaps.	Passed several hours comfortably, but was obliged to undergo a hurried journey of twenty-four hours, in the winter, after which he sunk and died.	M. LARREY. *Memoirs of Military Surgery*, vol. ii.
Lateral flaps.	For six days seemed in a fair way for recovery; took the plague, and on the seventh day died, the stump becoming gangrenous.	M. LARREY. Idem.
Lateral flaps.	Relief to his sufferings followed; was obliged to be moved with the army, and died on the road.	M. LARREY. Idem.
Lateral flaps.	Patient was in a prostrated condition; pulse scarcely perceptible.	M. LARREY. Idem.
Lateral flaps.	Operation as in number 12, was performed at the solicitation of patient, and contrary to opinion of operator.	M. LARREY. Idem.
Compressed the artery; lateral flaps.	Wound healed; health reëstablished; about to be discharged when she was seized with diarrhœa, and died three months after operation.	M. BAFFOI'S *Bulletin de la Faculté de Mèdécine*, tom. viii., 1812.

SEX.	AGE.	DISEASE OR ACCIDENT.	CONDITION.	DATE AND RESULT.
15. M.		Very extensive gun-shot wound of thigh; comminuted fracture of bone.	In favorable condition.	1813. Died on 29th day.
16. M.	25	Enormous encephaloid tumor of thigh, extending above the trochanter.	Emaciated, suffered constant and severe pain; tumor elastic, but not fluctuating.	1820. Died in 9 weeks.
17. F.	50	Necrosis of femur—with abscesses.	Discharge of bone through fistulous passages; severe pain.	1821. Died on 12th day.
18. F.	42	Cancerous tumor of thigh.	Dangerous hemorrhage in attempting to extirpate the tumor.	1824. Died on 9th day.
19. M.	34	Necrosis of femur existing nineteen years.	Abscess formed, resulting in fistulas, which had long existed.	1824. Cured.
20. M.	21	Tumor grew on thigh-bone, was fractured and untreated.	Extensive suppuration, emaciation, hectic; in a sinking and destitute condition.	1824. Died on 11th day.
21. M.		Comminuted fracture of the thigh-bone.	Fragments passed each other with muscle between the extremities.	1827. Cured.
22. M.	26	Scrofulous disease of thigh following injuries.	Scrofulous habit; pale, feeble, sickly appearance.	1831. Died on 14th day.
23. F.	25	Caries of knee followed by necrosis of femur.	Extensive suppuration and great suffering.	1832. Cured.
24. F.	15	Malignant tumor of knee and thigh, with spontaneous fracture of femur.	Great suffering and failing health.	1832. Died on 11th day.
25. F.	26	Immense osteo-sarcomatous tumor of thigh.	Fluctuating in some parts; in others of cartilaginous hardness; superficial veins greatly dilated.	1834. Died on 20th day.
26.	13	Osteo-sarcoma of thigh.	Scrofulous habit of body.	1834. Died on 13th day.
27.		Fracture through trochanters.	Extensive suppuration; emaciated; symptoms of sinking.	1834. Died in 10 hours.
28. M.		Gun-shot wound of thigh and fracture of trochanter.	Great exhaustion from previous suppuration.	1835. Died during operation.

OPERATION.	REMARKS.	AUTHORITY.
Lateral flaps.	Ligatures had come away, cicatrization to some extent, when he was imprudent in diet, had fever and dysentery which proved fatal.	M. LARREY. *Memoirs of Military Surg.*, vol. iii.
Lateral flaps; first tying artery.	Severe hemorrhage, which had to be controlled by styptic powders; slowly convalesced; cicatrization did not commence in two months; was imprudent in diet.	M. PELIKEN. *Med. Chir. Trans. of the Imperial Acad. of Wilna*, 1839.
Lateral flaps; first secured the artery.	Severe hemorrhage followed; violent fever, wound opened; profunda artery arose above Poupart's ligament.	M. PORCIENKO. Ditto.
Ligated artery to stop hemorrhage, then amputated at hip joint.	Had tetanic spasms on ninth day; wound did not unite; cancer was found in lungs and pleuræ.	M. GERDY. *Bulletin Gén. de Therap.*, 1835.
First secured the artery; lateral flaps.	Found great difficulty in bringing the flaps over the articulation; union nearly complete on eighth day; cure complete in six weeks.	M. DELPECH. *Revue Médicale*, Sept. 1824.
Lateral flaps.	Did well for a time, but an ulcer on sacrum became gangrenous, and he died of exhaustion.	VON WALTHER. *Graef et Walther Jour.*, vol. vi.
First secured the artery; single flap on inside of the thigh.	Union by first intention; six months afterwards symptoms of chronic peritonitis occurred which proved fatal.	M. DELPECH. *Jour. Gén. de Méd.*, 1828.
Anterior and posterior flaps.	Did not wish union by first intention; bone soft and of a reddish appearance on section.	M. VELPEAU. *London Med. Gaz.*, vol. viii.
Compressed artery; lateral flaps.	Intended to amputate thigh, but found bone too much diseased; cicatrization nearly complete on fiftieth day.	Prof. JAEGER. *Zeitschrift für die gesammte Méd.*, Band. 3.
Ligated artery first; lateral flaps; tied femoral vein.	Did well for a time, symptoms of phlebitis arose which proved fatal.	M. BLANDIN. *Transactions Médicales*, vol. x.
Compressed the artery; circular operation.	Following day had fever and diarrhœa; got better; on eighth day union had commenced; on fifteenth day very favorable.	KORSENIEWSKI. *Med. Clin. Trans. of Imperial Acad. of Wilna*, 1839.
	Extensive suppuration; death followed from exhaustion.	DIEFFENBACH. *London Lancet*, 1834–5.
	Patient bore operation well; lost but little blood; pulse grew feeble and surface cold; died 48 days after accident.	DIEFFENBACH. *Jour. Univers. des. Sci.*, vol. xlviii.
Lateral flaps.		M. ROUX. *Gazette des Hopitaux*, 1830.

SEX.	AGE.	DISEASE OR ACCIDENT.	CONDITION.	DATE AND RESULT.
29. M.	17	Fungous tumor of periosteum in upper part of thigh.		1835. Died several days after operation.
30. F.		Fracture of femur from a gun-shot wound.		1835. Died in several days.
31. M.	24	Fracture of femur from a gun-shot wound.		1836. Cured.
32. M.	28	Compound comminuted fracture of thigh.	Extensive suppuration.	1840. Cured.
33.		Gangrene of stump followed amputation at knee-joint.	Gangrene extending up thigh.	1841. Cured.
34. M.	26	Large exostosis of right femur extending as high as trochanter.	Abscesses formed and fistulous passages; great suppuration and hectic symptoms.	1847. Cured.
35. M.	5	Cancerous affection of femur.		1848. Cured.

AMPUTATIONS IN

1. F.	12	Disease of right hip-joint.	Emaciated; suffering symptoms of hectic, suppuration of joint.	1774. Died on 18th day.
2. M.		Gun-shot wound, with fracture of femur.		1812. Cured.
3. M.		Gun-shot wound, with fracture of femur.	Several months after had caries, with suppuration; hectic, and emaciation.	1814. Died on 30th day.
4. M.		Thigh crushed by machinery.		1814. Died on following day.
5. M.		Fracture of femur from gun-shot.	In a very unfavorable condition.	1814. Died in 24 hours.
6. M.		Gun-shot wound.	In a very bad state.	1814. Died on 8th day.
7. M.		Sloughing and hemorrhage after amputation of thigh for gun-shot wound.	Great prostration; ligature of femoral artery did not prevent bleeding.	1814. Died in 7 hours.

OPERATION.	REMARKS.	AUTHORITY.
Ligated the artery; lateral flaps.	Articulation found to be healthy.	M. ROUX. *Nouv. Bibl. Méd.*, 1830.
		CLOT BEY. *Gazette des Hopitaux*, tom. iv.
Anterior and posterior flaps, according to Béclard.	Convalesence complete in forty days.	M. BAUDENS. *Lancette Francaise*, 1836.
Single anterior flap; used twenty-two ligatures.	Discharged cured in about ten weeks.	M. SEDILLOTT. *Memoires de Chirurgie*, t. I.
	So far recovered at the end of four months as to be able to walk about.	M. TEXTOR. *Gaz. Médicale de Paris*, 1841.
Anterior and posterior flaps, according to Béclard, but modified.	Ether was administered; four-fifths healed by first intention; convalescence complete on 90th day.	M. HENOT. *Archiv. Gén. de Med.*, 1847.
	Cure complete in twenty-two days; chloroform successfully administered.	M. GUERSANT. *Jour. de Med. et de Chirurg. Prat.*, 1848.

BRITISH PRACTICE.

First incision from great trochanter backwardly to inside of thigh; second forward; artery divided and tied.	Acetabulum carious; lungs almost totally reduced to matter, especially on the right side; an abscess in abdomen opening into joint.	Mr. KERR. *Ed. Med. and Philosoph. Com.*, vol. vi., 1779.
	Was seen after three years enjoying perfect health.	Mr. BROWNRIGG, *Guthrie on Gunshot Wounds*, London, 1827.
Laid bare artery and tied it; lateral flaps.	Had two attacks of hemorrhage from stump; condition very variable, and finally died of irritation and exhaustion.	Dr. EMERY. *Guthrie on Gunshot Wounds*, London, 1827.
	Operation performed immediately.	Mr. BADLEY. *Cox's Mem. on Ampu. at Hip Joint.*
Circular incision, as if to amputate thigh, then cut upon joint.		Mr. COLE. *Cooper's Surg. Dict., Art. Ampu.*
		Mr. BLICKE. *Guthrie on Gunshot Wounds.*
Applied fourteen ligatures; lateral flaps.	Profunda given off from external iliac; femoral perfectly open where ligated; last hemorrhage from small branches of profunda.	Mr. GUTHRIE. *Work on Gunshot Wounds.*

SEX.	AGE.	DISEASE OR ACCIDENT.	CONDITION.	DATE AND RESULT.
8. M.				1814. Died on 8th day.
9. M.		Gun-shot wounds, and fracture of cervix femoris.	Exhausted; wound sloughing, ulcer on sacrum.	1815. Cured.
10. M.				1815. Died in 40 hours.
11. M.				1815. Died.
12. F.	19	Osteo-sarcoma of immense size.	Tumor involved nearly whole thigh; firm, pale, covered with enlarged veins.	1819. Died on 6th day.
13. M.	40	Disease of femur as high as trochanter, following amputation of thigh.	Stump very painful; rapidly failing.	1824. Cured.
14. M.	17	Necrosis of femur with extensive suppuration.	Much exhausted with long continued suppuration, (two years), thigh greatly swelled, painful; emaciated.	1823. Died after 8 weeks.
15. M.	25	Disease of knee, with caries of femur and a spontaneous fracture.	Leg became strongly flexed; extensive suppuration, with emaciation, hectic, and sinking.	1826. Cured.
16. M.	23	Gun-shot wound of thigh, and fracture of femur.	Vessels of thigh uninjured.	1827. Cured.
17.		Disease of femur from knee to the head of the bone.	Soft parts in a diseased condition.	1829. Died on 2d day.
18. F.	2	Compound fracture of femur at upper third.	Severe laceration of soft parts; artery torn but no bleeding.	1831. Cured.
19. M.		Compound fracture of femur by machinery.	Collapsed; thigh stripped of its integuments from knee to groin; lower portion of femur crushed.	1835. Died in 30 hours.
20. F.	22	Thigh had been amputated for long-continued pain of knee; pain returned in stump.	Nerve was resected, but with only temporary relief; nerve contained hard bodies; suppuration occurred, which relieved pain temporarily.	1836. Cured.
21. M.	26	Osteo-medullary sarcoma of femur.	Suffered severe pain for six years.	1843. Cured.

OPERATION.	REMARKS.	AUTHORITY.
	This patient died of fever, which had no connection with the operation.	Mr. BROWNRIGG. *Guthrie on Gunshot Wounds.*
Lateral flaps.	Reported nearly well at the end of eighteen weeks.	Mr. GUTHRIE *On Gunshot Wounds.*
		Mr. BROWNFIELD. *Cooper's Lectures, London Lancet*, 1824.
Compressed the artery.		Mr. BROWNLEY. *Cooper's Lect., London Lancet*, 1824.
Artery compressed; lateral flaps.	The symptoms following operation were mild, slept well; wound enlarged very much with a tumor, which proved to be a cancerous degeneration of the muscle.	Mr. CARMICHAEL. *Trans. of Fellows of King's and Queen's Coll. of Phys., Ireland*, vol. iii.
Compressed artery; lateral flaps; applied four ligatures.	Operation performed very slowly; waited for hemorrhage to occur.	Sir A. COOPER. *London Lancet*, vol. ii., 1824.
Compressed artery; lateral flaps; used twelve ligatures.	Was greatly prostrated; suffered from irritability of stomach and diarrhœa; improved, wound nearly healed at end of a month, attacked with ascites, and died in eight weeks; liver enlarged, other organs healthy.	Mr. SYME. *Edin. Med. and Surg. Jour.*, vol. xxi.
Single internal flap owing to diseased condition of integument; applied twelve ligatures.	Fainted during operation; suffered from diarrhœa, irritation of stomach; nearly well in six weeks; in robust health at end of three months.	Mr. ORTON. *Medico-Chirurg. Trans.*, vol. xiii.
Lateral flaps; compressed the artery.	Flow of blood continued after ligature of vessels; ceased upon lengthened exposure to the air; convalescent in six weeks.	Mr. BRYCE. *Glasgow Med. Jour.*, Aug. 1830.
Lateral flaps.	Lost but little blood; suffered severely from the shock of the operation.	Mr. LISTON. *Lond. Med. Gaz.*, vol. iii.
Compressed artery; lateral flaps.	Operation was performed immediately; child became pulseless at close of operation, but reaction soon came on, and she gradually recovered; cure complete in five weeks.	Mr. MACFARLANE. *Clin. Reports of Surg. Cases at Glasgow Roy. Infir.*, 1832.
First secured artery; anterior and posterior flaps.	The boy was of a scrofulous habit; lost a large quantity of blood before the operation, which prostrated him very much.	Mr. SMITH. *London Med. Gaz.*, vol. xvi.
Ligated artery high up.	Severe prostration followed the operation; reaction came on, and she perfectly recovered; no disease of knee existed, but a neuralgic condition of the nerves of that limb.	Mr. MAYO. *London Lancet*, 1836–7.
Anterior and posterior flaps.	Left hospital six weeks after operation; wound healed by first intention; four months after died of a malignant disease, beginning as a tumor in hypochondrium.	Mr. HANDYSIDE, *London and Edin. Monthly Jour.*, 1845.

SEX.	AGE.	DISEASE OR ACCIDENT.	CONDITION.	DATE AND RESULT.
22. F.	23	Disease of the stump of the thigh, which had been previously amputated.	Stump covered with fungous excrescences, tender and painful; has constant aching pain in the stump; general health good.	1844. Cured.
23. M.	31	Disease of right knee for eighteen months, following an injury.	Abscesses formed with free suppuration; knee became disorganized; an irregular form of bone could be traced along the whole extent of femur, and was considered malignant.	1846. Cured.
24. M.	24	Fracture of both legs from fall of a bank of earth; dislocation of ankle; amputated thigh; necrosis followed.	Attempted to save both legs; went on well for some days, but was seized with symptoms of phlebitis, got better, but suppuration followed; began to sink.	1848. Cured.
25. M.	18	Disease of eight years standing, extending from ankle to knee, and finally to femur with caries.	Extensive suppuration, involving thigh nearly to the hip; great emaciation, with symptoms of hectic and danger of sinking.	1849. Cured.

AMPUTATIONS IN

1.				1806. Cured.
2. M.	10	Fracture of right femur, improperly managed.	Extensive caries of femur; suppuration free, hectic symptoms; thigh resembled spina ventosa.	1824. Cured.
3. M.	25	Tumor of left thigh following fracture of the femur.		1837. Died 7 weeks after operation.
4.	child	Coxalgia.		1846. Cured.
5. M.	22	Thigh severed by rail-road cars.		1847. Died same day.
6. M.	23	Compound fracture of cervix femoris, by a musket ball.		1849. Died on 2d day.
7. M.	43	Osteo-cartilaginous exostosis of femur.	Nearly two years previously the thigh had been amputated for the same disease; after a year it returned with severe symptoms.	1850. Cured.

OPERATION.	REMARKS.	AUTHORITY.
Anterior and posterior flaps; used the horse-shoe compressor.	Nothing worthy of note occurred during convalescence; discharged at the end of about three months; six months after was in robust health.	WM. S. COX, Esq. *Mem. on Ampu. of Thigh at Hip-Joint*, Lond., 1845.
Applied the horse-shoe compressor; anterior and posterior flaps.	Slight oozing continued, and the wound was re-opened; no artery found; became collapsed, finally rallied, and was discharged cured on the sixtieth day; became very fat; disease in periosteum.	Mr. J. WHIPPLE. *London Lancet*, 1846.
Anterior and posterior flaps; applied twenty-one ligatures.	Upon amputating the thigh, the bone had an ivory hardness, and the veins were thickened; wound did not heal, nor did the exposed bone exfoliate.	Mr. SYME. *Monthly Journal of Med. Sciences*, 1848.
Anterior and posterior flaps.	Recovered without any unfavorable symptoms, but two ounces of blood lost; patient under the influence of chloroform.	Mr. WIGSTROM. *London Lancet*, April, 1850.

AMERICAN PRACTICE.

	This case is also noticed as the first operation of the kind in this country, in the Report of the Committee on Surgery of the Am. Med. Assoc. *Vide Transactions*, &c. vol. iv.	Dr. BRASHEAR. *New Orleans Med. and Surg. Jour.*, vol. ii.
Tied femoral and profunda arteries, the latter having a high origin: lateral flaps; seventeen ligatures.	Suffered from general irritation; in eight days two-thirds of stump was healed; in ten weeks cure was complete.	Dr. MOTT. *Phil. Jour. of Med. and Phys Sci.*, vol. v., N. S.
Made circular incision; compressed artery; applied seven ligatures; patient depressed by fear.	Did perfectly well for a month; cough set in; a hard tumor grew rapidly in left groin; an aneurismal tumor arose on end of stump, which burst; tied femoral artery to control hemorrhage.	Dr BRAINARD. *Am. Jour of Med. Sci.* vol. xxii.
		Dr. DUFFY. *Gibson's Surgery*, 8th ed. vol. ii., 1850.
Lateral flaps.	This case occurred in the New-York Hospital.	Dr. BUEL. *Am. Jour. of Med. Sci.* July, 1848.
Lateral flaps.	This case also occurred in the New-York Hospital.	Dr. LENTE. *Trans. Am. Med. Ass.*, vol. iv., 1851.
Anterior and posterior flaps, the latter being made by cutting from without inwards towards the bone.	Chloroform was administered with the best results; exhibited no signs of shock from operation; nine-tenths of wound united by first intention.	Dr. VAN BUREN. *Trans. of N. Y. Acad. of Medicine*, vol. i.

SEX.	AGE.	DISEASE OR ACCIDENT.	CONDITION.	DATE AND RESULT.
8. M.	37	Scrofulous degeneration of knee and femur.	Great prostration; soft parts diseased and œdematous to groin; free suppuration.	1850. Cured.
9.				1851. Cured.
10. M.	10	Progressive disease of thigh after amputation; osteo-sarcoma following a severe injury of knee.	Strumous habit; long existing suppuration of thigh; emaciation; life threatened.	1851. Cured.
11.				Cured.

Summary of Cases occurring in Continental Practice.—Whole number of operations, 35, of which 14 were successful, and 21 fatal; being a mortality of 60 per cent. *Sex*, 24 males, 7 females. *Age*, varying from 5 to 50. *Causes*, 17 were for severe injuries, of which 12 were gun-shot wounds; 7 recovered and 10 died; 16 were some chronic form of disease, involving extensive suppuration and constitutional deterioration; of these 6 recovered and 10 died; 2 not given.

Four died within 24 hours, of which 2 were in military service, amputation being performed at their own request contrary to the surgeon's wish; 2 were exhausted from previous disease; 1 died on the third day after a journey of twenty-four hours; of the remainder, 1 had the plague; 1 phlebitis; 2 sunk from exhaustion; 2 from imprudencies in diet had fever and dysentery; 1 fever; 1 tetanus; 2 doubtful. Of those whose time of death is uncertain, 1 died while being removed with the army; 1 died of fever. Anæsthetics were used in two cases, both successful; in one ether was employed, in the other chloroform.

In addition to the cases given in the tables, the following are

OPERATION.	REMARKS.	AUTHORITY.
Anterior and posterior flaps, first made by entering knife just above tuberosity of ischium, and emerging nearer ant. sup. process than trochanter; compressed artery in this flap.	Chloric ether administered very successfully; operation performed in thirty seconds; discharged in about four months in excellent health; acetabulum sound; femur greatly diseased.	Dr. MAY. *Am. Jour. of Med. Sci.*, 1851. *Trans. of Am. Med. Assoc.*, 1851.
	This case is reported to have occurred in Washington Co., Maryland.	Drs. RICHARDS AND CLAGGETT. *Rept. of Com. on Surg. in Trans. Am. Med. Assoc.*, 1851.
Anterior and posterior flaps, the latter of which was divided, making three flaps.	Chloroform administered; on eighth day, wound seven-eighths healed; suppuration very trifling; went to school on fourteenth day after operation, and continued to do so during winter; specimen that of true osteo-sarcoma; joint healthy.	Dr. BRADBURY. *Bost. Med. and Surg. Jour.*, June 1852.
		Dr. FULLER, Norwich, Ct. Comm. by Dr. PARKER.

alluded to by authors, the result only being given. Of the successful cases, Orthon, Rossi, Hysern, Wedemeyer, Delauney, Langenbrek, have each had single examples. Of unsuccessful cases, Ravaton, Graef, Pelletan, Velpeau, Gouraud, Vidal, Gensoul, have each had 1; Kerst 2, Dupuytren 3. These cases added to the foregoing make the whole number of operations on the continent 53; of which 20 were successful and 33 fatal, increasing the mortality before given to over 62 per cent.

Summary of the Cases in British Practice.—Whole number of operations, 25, of which 11 were successful, and 14 fatal; being a mortality of 56 per cent. *Sex*, 18 males, 5 females, 1 not given. *Age*, varying from 2 to 40. *Causes*, 11 were for severe injuries, including gun-shot wounds; of these 7 were primary amputations, of which 4 died and 3 recovered; 4 were secondary amputations, of which 2 died and 2 recovered; in 11 some chronic form of disease, of which 5 died and 6 recovered; 2 not given. *Previous amputation* of thigh in 5 cases, 1 died and 4 recovered.

Two died within twenty-four hours; 4 between 24 and 48 hours; the remaining 6 between the 5th day and 8th week.

Of those dying within 24 hours, 1 had uncontrollable hemorrhage in an exhausted system; 1 was in a most unpromising condition from the severity of the injury. Of those dying between 24 and 48 hours, 1 suffered severely from the shock of the operation, 1 primary amputation after a severe injury; 2 not given. Of those dying after the 5th day, 4 died from extension of previous disease, 1 had fever not depending on the operation; 1 had ascites. In 1 chloroform was employed, and with success.

The following cases, as in the preceding summary, being too deficient in details to be admitted into tables, may here be noticed. Those reported as successful are Dr. Millengen, 2; that of an English sailor at the battle of Aboukir; as unsuccessful, Mr. Thompson, Mr. Brodie, Mr. Brownrigg (2), Mr. Syme, and Mr. Liston.* These cases, added to those already given, make the whole number of British operations 34; of which 14 were successful and 20 unsuccessful, being a mortality of over $58\frac{3}{4}$ per cent.

Summary of Cases occurring in American Practice.—Whole number of operations 11, of which 8 were successful and 3 fatal, being a mortality of 1 in $2\frac{2}{3}$, or of $27\frac{3}{11}$ per cent.; 7 were males, 4 not noted. *Age*, varying from 10 to 43, majority under thirty, 4 not given. *Cause* in 5 cases was some chronic form of disease, of which 4 recovered and 1 died; 2 were severe accidents with primary amputation, both fatal within 48 hours; one painful affection of joint, cured; 3 not given; 2 followed previous amputation of thigh, both of which were successful. The *operation* in 3 cases was performed with lateral flaps, 1 successful, 2 fatal; in 3 cases with anterior and posterior flaps, all successful; in 1 by the circular

* Mr. Cox, in his Memoir, gives Mr. S. Cooper the credit of an unsuccessful case, but this is a mistake. This surgeon began the operation in a severe case of fracture of the femur by a grape-shot, and "immediately the soft parts had been divided, as the bone was broken to pieces, the limb came off, leaving the head of the bone, the trochanters, and a small piece below them projecting. Had not the man appeared in a very bad way by the time the vessels had been secured, I should now have removed the head of the bone; but the shock of the operation was such that he survived it but a few minutes, though scarcely any blood was lost."—*Surg. Dict., Art. Ampu.*

method, which was fatal; 4 not given. In 3 cases anæsthetics were employed, all successful; in 2, chloroform was used, in 1, chloric ether.

General Summary of the Operation of Amputation at the Hip-Joint.

	Whole No.	Died.	Cured.	Ratio of Mortality.	Per cent.
In Continental practice,	53	33	20		$62\frac{14}{53}$
In British "	34	20	14		56
In American "	11	3	8	1 in $2\frac{2}{3}$	$27\frac{3}{11}$
Total,	98	56	42		$57\frac{1}{7}$

Cause of Amputation in Sixty-two Cases.

	Severe Injuries.	Died.	Cur'd.	Per cent. of deaths.	Chronic Disease.	Died.	Cur'd.	Per cent. of deaths.
In Continental practice,	17	10	7	$58\frac{14}{17}$	16	10	6	$62\frac{1}{2}$
In British "	11	6	5	$54\frac{6}{11}$	11	5	6	$45\frac{5}{11}$
In American "	2	2		100	5	1	4	20
Total,	30	8	12	60	32	16	16	50

ART. IV.—*Case of Carcinoma of the Eyelid—Blepharoplastic Operation after Dieffenbach's Method.* By C. THEODOR MEIER, M. D., of New-York.

MRS. L., sixty-eight years old, with the exception of some derangement of digestion caused by hypertrophy of the liver, enjoyed, in general, good health, noticed about ten years ago a wartlike excrescence upon the lower eyelid of the left eye, which, growing slowly, was removed four years ago by simple excision. But again a hard swelling in the eyelid and upon the lower margin of the orbit developed itself gradually

in size, and encroached upon the conjunctiva, the orbit, and downward upon the cheek. When I saw the patient in October, 1851, the hard tumor with an uneven surface was very little movable, therefore I anticipated the tumor being adherent to the periosteum. In November the skin of the eyelid began to ulcerate; and in January, 1852, a deep excavation, with hard, thick edges showed itself, from which a serous and bloody liquid was discharged. The diagnosis as of carcinoma of the eyelid was clear enough. The patient suffered a great deal from lancinating pains, hemorrhage, inflammation of the conjunctiva, and want of sleep; and having had the advice and different opinions of professional gentlemen about the disease, desired the operation very strongly.

On the 18th of February, 1852, the operation was performed with the kind assistance of Dr. Tellkampf and Dr. Gurdon Buck, of New-York. No ether or chloroform was administered, owing to valvular disease of the heart.

From the interior corner of the eyelid next to the lachrymal point, I commenced an incision downward to the cheek, then from the same point close to the border of the eyelid a horizontal incision was made to the external corner, thus preserving a very small linear part of the border of the eyelid. A third incision, beginning at the termination of the second, was carried downward to the cheek, connecting with the first in an acute angle. These three incisions formed a triangular space, and included all the diseased parts, which were removed as carefully as possible, being in intimate connection with the periosteum, and stretching into the orbit and partially under the eyeball itself.

This great defect of the eyelid had now to be replaced, and this was done in the following way: A nearly horizontal incision, from the external corner of the eyelid to the temple, about one inch and three quarters long, was made, and from the termination of this incision the scalpel was carried downward over the cheek nearly parallel with the external side of the triangle that was formed by the defect; the incision terminated on the same line with the inferior point of the triangle. Both these incisions included the flap designed for the new eyelid, and then a thick flap was separated from the subjacent

tissues. After the bleeding stopped, the flap was sidewards displaced and adapted to the defect of the eyelid, so that the above-mentioned triangular space was completely covered. The inner border of the flap was now brought in connection with the inner side of the triangle by means of six interrupted sutures; the horizontal border of the flap was united with that very small remaining part of the border of the eyelid by four sutures; besides these, one suture was applied on the external commissure of the eyelid. The deficiency of skin over the cheek, wherefrom the flap was taken, was left ununited only with the exception of a single suture on the most external part of the wound.

Fig. B. Fig. A.

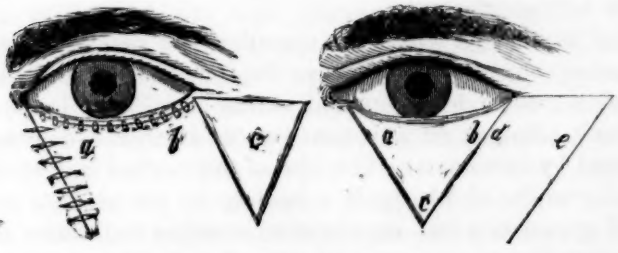

Fig. A and B show plainly enough the steps taken in this operation. Fig. A, *a*, *b*, *c* is the the triangle, or the defect of the eyelid after the removal of the diseased parts, *d e* the flap. Fig. B, *a b* shows the flap as it covers the defect, and united by sutures; *c* the place where the flap is detached from, the wound left untouched.

The raw surface of the wound over the cheek was covered with lint moistened with warm water, and ice-water applications ordered. The night of the following day, high fever, inflammation, and swelling of both eyelids, set in, extending even to the right eye. Leeches were applied behind the left ear, and ice-water continually applied during two days and nights over the face and forehead. From the fourth to the ninth day, all the pins and sutures were removed one after the other, and a few small straps applied. The flap had united by its borders to the surrounding parts, but the posterior surface of the flap did not unite immediately with the subjacent tissues; and in the first weeks a great deal of purulent matter was discharged, that forced its way partially through the

newly-united inner corner of the eyelid, partially through the outer border of the flap. This discharge ceased after the lapse of seven weeks, the flap being entirely adherent at all parts; the wound over the cheek had, three weeks after the operation, completely cicatrized, and left a very small scar. The shape of the eyelid appeared very good, only a slight ectropium had gradually formed in consequence of the contraction of the transplanted eyelid. As the carcinomatous destruction had involved most of the fibres of the orbicular muscle, the mobility of the eyelid was limited. The first week after the operation a prick with the point of a needle on the upper part of the flap could not be felt; but in the second week normal sensation recurred. Up to this time, July 1852, no relapse has taken place, and the general health of the patient is very satisfactory.

The method on which this operation was performed was Dieffenbach's method of sideways displacement, (*déplacement lateral*), a method he improvised at first in 1835, at Paris, in Lisfranc's Clinique, on a patient, whose inferior eyelid was destroyed by carcinoma. The idea of this method is, that the wound over the cheek, fig. B, *c*, healing by the gradual process of granulation and cicatrization, stretches and draws out the surrounding tissues, especially the flap itself, thereby preventing the new eyelid from contracting or coiling upon itself, as is always the tendency with transplanted skin. Left to this tendency, the object of forming a natural-looking eyelid could not be attained, and instead of the regular shape of the eyelid, there would be seen in its place a round and prominent piece of skin

The second advantage which this operation possesses is, that the flap, having a broad root, keeps up a free and undisturbed connection with the surrounding parts, from which the nourishing vessels of the flap enter; and the root of the flap, being formed close to the defect, is not exposed to be turned and twisted, as would be the case, where the flap is taken from a more remote part, where the connecting root has to be turned about two right angles. With this proceeding there is greater probability that the circulation of the flap will not be disturbed, and the chance of preserving the flap, and of union by the first intention, is therefore greatly increased.

ART V.—*Case of Dissection Wound, followed by great Constitutional Disturbance, and Death on the eighth day.* By W. D. PURPLE, M. D., of Greene, New-York.

[THE death of Dr. G. L. Spencer will have been noticed under the obituary head of our last number, and, from the character of the disease that terminated his professional career, is well worthy of a more extended notice. We take the liberty, therefore, of submitting the following extract from a letter to the Editor, from W. D. Purple, M. D., of Greene, who was a neighbor of Dr. S., and visited him during his last illness.—ED. JOURNAL.]

"On Thursday, the 10th of June, Dr. Spencer performed a post-mortem operation on the body of Mrs. Rich, who had been in feeble health with disease of the lungs for some months. About ten days previous to her death, more active symptoms confined her to her bed. Her symptoms before death, and ocular demonstration after, evinced extensive disease of both lobes of the lungs, and inflammation of the serous membrane. The cavities of the chest and abdomen were filled with a sero-purulent fluid, and a diffuse cellular inflammation was apparent. There was no erysipelatous affection of the skin, nor any other symptoms or appearances that do not appear in such diseases in our most respectable families.

"The autopsy was performed twenty-four hours after death; and while in the act of closing the first incision with a needle, he slightly pricked his thumb on the left hand. It was very slight, did not bleed, and on examining it nothing could be seen nor felt, and he came to the conclusion that it might have been merely imaginary, and nothing further was thought of the matter, until about twenty-four hours after, he discovered a slight irritation at the place. He continued in active labor during the day, and towards evening was taken with a chill, with a sense of soreness over the whole body. The thumb became painful, and a reddish pustule of three or four lines in diameter appeared; dyspnœa soon supervened; this was accompanied by a depressed typhoid pulse, headache, and nausea. On Saturday, an erysipelatous redness, with great

tenderness, presented itself below the axilla on the left side, and after two days it had extended to the groin. The difficult breathing and the pustule had entirely subsided on Sunday. The hand and arm were entirely free from pain, and only a scabous surface was left upon the thumb. On Monday, the right foot and ankle assumed a reddish flush, and became painful. On Tuesday the pain had subsided, and the nervous system became entirely under the control of the animal poison; stupor succeeded, and he could with difficulty be aroused to consciousness. On the eighth day after the wound he expired. It is proper to observe that there was no evidence of diseased lymphatics of the arm, nor was there any enlargement or tenderness of the glands of the axilla or groin.

"The treatment he received was such as authority recommends. The poison had been generally diffused throughout the system before it attracted attention. The external application of nit. of silver and tr. iodine, with alteratives and stimulants internally, were freely resorted to. Anodynes to allay the irritation of the nervous system were not neglected. But all in vain. Death had marked him as his victim, and with an unerring shaft.

"The death of this excellent co-laborer in the field, and in such a manner, has filled the profession with the most profound regret. It has awakened an anxiety to know, if it can be known, what they have escaped, and under what circumstances they are exposed; although we have not neglected our duty in the search of pathological science, but have embraced every opportunity for post-mortem examinations; yet this is the first instance that has fallen under my observation where injury has resulted from a "dissection wound." I hope you or some of your correspondents who have access to extensive libraries, will enlighten us on this subject, and state what diseases are most liable to generate this species of animal poison; at what period after death it is the most virulent; what are preventives, and the best means of cure? what proportion prove fatal? with other statistic information in relation to this disease."

ART. VI.—*Upon Acute Gastritis, with Cases.* By JOHN A. LIDELL, M. D., of New-York.

ACUTE inflammation of the mucous membrane of the stomach, not produced by the action of corrosive poisons, is generally considered by medical writers to be a very rare disease. Dr. Thomas Watson uses the following strong language: "Idiopathic gastritis, in an acute form, I never saw."* In another place he says: "But as idiopathic gastritis is rare, fatal idiopathic gastritis is of course still more so. Louis states, that during six years' experience at La Charité, in which period he noted the details of 6,000 cases of disease, and of 500 dissections, he did not meet with a single instance of fatal idiopathic gastritis."† Preparatory to a narrative of several fatal cases of the disorder under consideration, M. Andral also remarks, that "for some years after the publication of M. Broussais' work on inflammation of the digestive passages, acute gastritis was considered by many physicians as a very common affection, and a number of acute disorders, widely differing from each other, were referred to it." However, more exact observation soon pointed out that acute inflammation of the stomach was not an affection so frequently met, and that in many cases its existence had been gratuitously supposed. This was the truth, but men did not keep to it. A reaction in a contrary direction soon took place; and some medical men went so far as to say, that acute gastritis, with the exception of that produced by corrosive poisons, was an inflammation so uncommon that they had not as yet met with a single instance of it."‡

No apology, therefore, is necessary for laying before the profession the narrative of the following cases, which we have met with during the past year, in the course of pathologico-anatomical investigation in a large field. All of them were cases of sudden death, which the coroner was called on to investigate. We did not see either of them during life. Their imperfect histories have been gathered principally from the testimony taken at the inquests.

We may remark in passing, that perhaps one reason why M. Louis and other gentlemen of large experience in hospital practice have so seldom met with acute idiopathic gastritis, is the rapidity with which death ensues, sometimes almost before the relations of the sick man, who are generally ignorant people, become alarmed,

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* WATSON'S *Lectures*, p. 769. † *Op. Cit.* p. 770.
‡ *Med. Clinic*, vol. i. p. 212.

and often before the arrangements necessary for removal to hospital can be effected.

CASE I.—E—— S——, aged 27, born in Virginia (colored), a cartman of temperate and industrious habits, residing with his parents in comfortable circumstances, began to complain of illness, Feb. 14th, 1852, at eleven o'clock, A. M. He had first nausea, and in a short time a severe chill, with vomiting, when his employer advised him to go home, which he did. After reaching home, he complained of much pain located in the pit of the stomach, vomited some yellowish fluid several times, and said he felt weak. His mother gave him some ginger tea, and urged him to send for a physician, which he declined to do, till his employer should visit him in the evening. He continued to vomit and complain of pain in the stomach, with general debility. At four o'clock P. M. a dose of castor oil was administered, after which he did not vomit again. He continued, however, to complain of pain in the stomach, sank rapidly, and very unexpectedly died at ten o'clock on the same evening, before the arrival of a physician, and but eleven hours after the attack. On the morning of the day in question, he ate his breakfast as usual, and appeared to be in good health. A fortnight before this he had "a cold," of which, however, he got better. About two years previously, he had an attack of pleurisy. There was no suspicion that he had taken poison, nor of foul play of any sort. His intellect remained clear to the last. He exhibited no head symptoms.

Dissection fifteen hours after death.—Body strong and muscular, vigor mortis well marked. The stomach contained about one quart of yellowish fluid, having an oily substance (castor oil) mixed with it, and floating on its surface. Its mucous membrane was injected with blood, presenting a uniform reddish color, with some dark-colored stellate spots pretty evenly distributed over its surface. This membrane was also tumid or thickened by sero-sanguineous infiltration, and somewhat softened throughout its whole extent. It was every where covered with an abundant quantity of bloody mucus. We gathered nearly two ounces of this reddish-colored mucus with but little difficulty. The esophagus was normal. The duodenum presented morbid appearances, similar to the stomach, but the rest of the intestines exhibited nothing but venous congestion. The spleen was less than half the normal size (atrophied); its investing peritoneum had a grayish-white, semi-opaque, and corrugated appearance; its parenchyma was indurated, pale red in color, and presented

numerous whitish fibrous bands or threads, traversing it in every direction. The liver was bound to the diaphragm by some old adhesions, enlarged, and contained more than the normal quantity of blood (venous congestion), but in every other respect was healthy. The gall bladder was filled with normal bile. There were abundant old pleuritic adhesions on both sides of the thorax. Each lung contained more than the usual quantity of blood, but otherwise was healthy. The heart was hypertrophied, fatty, flabby, and exhibited some milk spots, formed by an organized layer of false membrane, which we peeled off with a little care. The edges of the mitral valve were somewhat thickened by interstitial deposit, and semi-cartilaginous in consistence, but the other valves were natural. The heart contained no coagula. The kidneys were congested (venous), but in other respects normal.

Did this patient die of acute gastritis? It seems to us that a rigid interpretation of the vital phenomena, and the morbid appearances exhibited on dissection, warrant no other than an affirmative answer.

Was this gastritis a result of corrosive or irritant poisoning? After careful inquiry, no evidence was discovered which would warrant even a reasonable suspicion that such was the case.

Admitting, then, that this was a case of acute idiopathic gastritis, several queries are naturally suggested.

Why did the vomiting cease at four o'clock, when the result showed that the inflammatory lesion was not arrested, but, on the contrary, was rapidly advancing to a fatal termination? The following seems to be a rational explanation: By extension of the inflammatory action beyond the mucous membrane, the muscular coat of the stomach became paralyzed at that time, and so profound an impression was also produced upon the whole nervous system, through the pneumogastric and sympathetic nerves, that the action of the voluntary muscles, which perform an important part in the act of vomiting, was no longer excited. This explanation also throws some light upon the difficulty often experienced of producing emesis in cases of corrosive poisoning;—we say some light, because the influence which poisons exert directly upon the nervous system, aside from inflammation of the tissues with which they are in contact, should not be overlooked.

What relation (if any) existed between the atrophy of the spleen and the gastritis? It is reasonable to believe that a gland like the spleen, capable, on account of its peculiar structure, of accommodat-

ing itself to the varying conditions, with regard to the quantity of blood in the portal vascular system, and intimately connected with the stomach, first by contiguity, and second, by a close relation of blood-vessels—it is reasonable to believe that such a gland, when, through atrophy, it is able to discharge its functions only imperfectly, or not at all, may exert a morbid influence upon the stomach. However, this question cannot be satisfactorily answered without further interrogation of nature; for accurate observations concerning the conditions of the stomach which accompany the various morbid states of the spleen, sufficient in number to warrant reliable inductions, have not yet been collected.

CASE II.—H——— G———, aged nineteen, healthy, except that he complained of palpitation of the heart and shortness of breath after any severe exertion, ate both a hearty breakfast and dinner on Sunday, May 9th, 1852, and appeared in every respect to be in usual health. In the afternoon, with his brother and a man employed at a stable in the neighborhood, he partook freely of rock candy (he ate about half a pound). Afterwards he drank a single glass of beer, and ran to a fire (the day was warm). About 4 o'clock he returned to the stable, and complained of sickness. He vomited a good deal and purged, got shortness of breath, groaned a good deal, complained of feeling cold and weak, rapidly lost his strength, and died about 5 P.M., or one hour after returning to the stable. Some water was given him to drink, but nothing else. The other persons who partook of the same candy and beer did not suffer at all. He was carried home dead.

Dissection 16 *hours afterwards.*—Rigor mortis very strong. The stomach contains eight or ten ounces of fluid, tinged greenish yellow, and mixed with a little food. Its mucous membrane, throughout, is reddened, thickened by sero-sanguineous infiltration, slightly softened and coated over with an abundant quantity of tenacious mucus. The gastric and mesenteric veins were full of blood. The small intestines exhibited venous congestion. The liver was considerably enlarged, and the spleen much enlarged. The lungs did not collapse on opening the thorax. They were large in volume, increased in weight, contain more than the normal quantity of blood, and exhibit an abundant quantity of pale serum, effused into the air-cells, the smaller air-passages, and the pulmonary tissue. In other respects they were normal. The heart was considerably enlarged (hypertrophy), rather fatty, and its apex was well rounded off. The mitral valve was

thickened, and exhibited whitish fibrous vegetation upon its margin, particularly that of the aortic segment. The tricuspid was abnormal in a similar manner, but in a much less degree. The aortic valves were thickened, and the valves of the pulmonary artery normal. The foramen ovale was partially open. The right side of the heart and the large veins were full of blood which every where was fluid.

This interesting case differs from the last in several important particulars, referring both to the symptoms exhibited during life, the rapidity with which death ensued, and the lesions found on dissection. Both of them had vomiting and great prostration of strength, but G——— had, in addition, rapidly increasing dyspnœa and speedy dissolution. In his case, the symptoms of gastritis were masked by those of an intense pulmonary congestion resulting from hypertrophy and valvular disease of the heart, by which life was extinguished much sooner than it would have been by gastritis alone. The partially open state of the foramen ovale was an interesting fact revealed by the dissection. The size of this opening was that of a crow quill, but its direction was so oblique as to permit scarcely any commingling of the blood in the auricles. With regard to the foramen ovale, it may be not uninteresting to state here that we have noted its condition in 34 cases, and that in 5 of them it was open to a greater or less extent.

CASE III.—M——— C———, aged 55, born in Ireland, living out at service, a hard drinker, came to her brother's house for rest. They were very poor people. On Thursday, February 26, 1852, she complained of sickness. She had entire loss of appetite, vomiting, chilliness, sleeplessness, wandering delirium, in which she talked principally of her deceased parents, and muscular tremors. These symptoms lasted till death, March 1st, 1852, at 7 P.M. The vomiting was an urgent symptom. She threw up every thing she took into the stomach. She drank no liquor after coming to her brother's. No physician was in attendance.

Dissection 18 *hours after death.*—Rigor mortis entirely absent. The quantity of fat in the cellular tissue generally is abundant. *Head.*—Skull thicker than normal. The arachnoid membrane exhibits more or less opacity through a considerable part of its extent, presenting a pearly appearance, but it is not thickened. The nervous tissue, particularly the cortical substance, is rather exsanguinated than otherwise. The sub-arachnoidean effusion of serum is more copious than natural at the vertex, but the ventricles are nearly

empty. The brain presented no other abnormity. *Chest.*—No pleuritic adhesions. Both lungs contain pigmentum nigrum in excess. Near the apex of the right lung we find a tuberculous concretion, as large as a pea, of a chalky consistence, situated a little beneath the pleura. About it, there is a scar-like puckering of the pleura, and the smaller bronchial twigs are somewhat dilated. The bronchiæ are reddened. External to the pericardium is an abundant deposit of fat. Beneath the pericardial investment of the heart is a layer of fat, which covers the muscular structure of the whole organ except a small part of the left ventricle. Near the apex this layer of fat has encroached so much upon the muscular wall of the right ventricle, as to reach nearly or quite down to the endocardium. The heart is also hypertrophied. The liver is enlarged, and exhibits the waxy variety of fatty degeneration. The gall bladder is full of dark green bile. The spleen is smaller than natural, and firmly glued to the diaphragm by old cellular adhesions. Its tissue is also indurated, anemiac, and exhibits a pale red color on section. The stomach contains about six ozs. of fluid resembling coffee. Its mucous membrane is more or less reddened, thickened, softened, and coated over with glairy mucus throughout its whole extent. These changes are most marked towards the pyloric extremity of the organ. The intestines contain much greenish excrement. The mucous membrane of the esophagus presents a slate color, in streaks or patches running longitudinally. At these places it is thickened and indurated rather than softened (chronic catarrh). It presents no other abnormity.

This was not a pure case of gastritis. The deceased had delirium tremens associated with the inflammation of the stomach. It is also worthy of remark, that here we meet again with atrophy of the spleen.

CASE IV.—An unmarried woman aged 19, had complained of illness one week. On Tuesday, April 26th, in the morning she got much worse; she vomited and complained of heat at the epigastrium, with general prostration. The surface of her body was cool. About 7 P.M. on the same day she again became much worse. She vomited rapidly, lost her strength, and died in a short time without a struggle. She presented no head symptoms. She had no diarrhœa. Deceased attributed her illness in great part to getting her feet wet about the menstrual period, whereby the menstrual flow was prevented.

Dissection 21 hours after death.—Rigor mortis well marked. The stomach and intestines exhibit a reddish brown color when viewed externally and in situ. The stomach is distended with gas,

but nearly empty of solids and liquids. Its mucous membrane (particularly the folds) is more or less reddened, thickened, and somewhat softened. The mucous membrane of the small intestines is reddened, roughened, softened, and covered with an abundant quantity of bloody mucus.

The intestines are distended with gas. Right pleural cavity completely obliterated by firm old cellular adhesions. Each lung contains more than the normal quantity of blood. There is a milk spot on the anterior surface of the heart, circular in shape, about one inch in diameter, and considerably elevated above the surrounding surface. It consists of old, organized plastic exudation. Its surface is not smooth but stringy. The heart is rather fatty, the foramen ovale is partially open; in all other respects the heart is natural. The liver exhibits a formative abnormity. The great fissure is farther to the right than usual, and in consequence, the left and right lobes are nearly equal in size. The spleen is much enlarged, and its peritoneal covering readily peeled off. The kidneys contain more than the normal quantity of blood (venous congestion), which renders them dark-colored. The uterus exhibits ulceration about its os. This ulcerated surface is slightly depressed, apparently from loss of epithelium, and presents a reddish brown color. The vagina contains an abundant quantity of leucorrhœal discharge. The peritoneal covering of the fundus uteri is colored reddish brown by injection of blood, and the tissue of the body of the organ is flabby, softened, and partially broken down in the interior. The uterus was retroverted with flexion of the neck, the axis of its body pointing backwards and downwards.

The dissection of this subject exhibited metritis conjoined with inflammation of the gastro-intestinal mucous membrane.

CASE V.—There is reason to suspect that some poison was taken in the following case, for the purpose of producing abortion, probably one of the essential oils.

A widow, aged thirty-two, sent for a physician, March 26th, 1852, who found her complaining of great pain in the abdomen and thighs, but without vascular excitement. On the 27th, the pain was less severe. On the 28th, the belly was found to be tender under pressure; the pulse was 100, and feeble, and she had great prostration of strength. On the 29th, she was pulseless at the wrist; she had nausea, vomiting, and great oppression at the pit of the stomach; her countenance was anxious, and breathing hurried. She died on the afternoon of this day. She was treated very properly for perito-

nitis. The fact that she had suffered a premature labor was carefully concealed from her physician, and he discovered it only by making a vaginal examination, his suspicions being roused; neither is it known when the labor occurred, nor whether it was produced by accident or design.

Dissection fifty-two hours after death.—Rigor mortis slight. The areolæ are enlarged, darkened in color, and their tubercles are increased in size, as in pregnancy. The lungs are somewhat congested, but in other respects natural. The right side of the heart is full of coagulated blood, nearly black in color. The organ is natural. The peritoneal cavity contains more than one quart of sero-purulent matter. The effusion occupying the pelvic portion is richest in pus. On the convex surface of the liver is a thin soft layer of grayish yellow false membrane. There is a considerable quantity of recent grayish yellow plastic exudation on the serous coat of the small intestines, in some places agglutinating them. This exudation is not so abundant about the large intestines. The uterus is about six inches in its long diameter, flaccid, and contains some decomposing bloody fluid. The mark of the placental attachment occupies the posterior portion of the body of the organ; this mark is about three and a half inches in diameter. The os and cervix uteri are gangrenous, that is, black in color, softened in consistence, and emitting a very fetid smell. A little pus was found in the uterine sinuses, near the left ovary, on cutting into them, but at no other point, though careful search was made. The parenchyma of the liver and spleen is softened, but presents no other abnormity. The coats of the stomach are *much* thickeend by *sero-sanguineous* infiltration. The mucous membrane is tumid, reddish brown in color, and softened throughout; the thickening of the coats, the darkening in color, and softening in consistence, are most marked at the fundus. The organ contained a few ounces of dark greenish-colored fluid, but was not contracted.

In this dissection, we see acute inflammation of the stomach conjoined with metro-peritonitis.

ART. VII.—*Memoir on Nicotine*, by M. ORFILA. Translated from the French, by CHARLES A. LEE, M. D. *With notes.*

(Continued from page 124 of present vol.)

Medico-Legal Question with regard to Nicotine. Case of Bocarmé, tried at Mons, June 15th, 1851.

EVERY one remembers the astonishing excitement produced by the accusation brought against the Count and Countess Bocarmé; the elevated standing of the prisoners; the rapid death of Gustavus Fougnies, the brother of the Countess, after the poisoning by nicotine; the mercenary design exposed by the public prosecutor, as the motive of the poisoning; the fact of the preparation of the nicotine by the count, and many other circumstances related in the act of accusation, assign this a place among the most important in judicial annals.

Act of Accusation.

The Attorney-General of the Court of Appeals of Brussels represents that the court, by a decree of the 16th April, 1851, transmitted to the Court of Assizes of the province of Hainaut the names, first, of Alfred Julien-Gabriel-Gerard-Hyppolyté Visart, Count Bocarmé, aged thirty-two years, landholder; born at the Camp of Weltevredern, in Java, &c.; second, of Lydia-Victoire-Joseph Fougnies, aged 32 years, wife of the Count Bocarmé; born at Péruwelz, and having lived for the last two years at Bury, accused of the crimes enumerated in the articles 301, 302, 59, and 60, of the Penal Code.

In consequence, the Attorney-General set forth the present act of accusation, in which the following facts and details are related:

The Count Hyppolyte Visart de Bocarmé, belonging by birth to one of the first families of Hainaut, married, in 1843, at Péruwelz, the daughter of an old grocer, who had two children; and whose son, having lost his right leg by amputation, possessed a very feeble constitution. The accused, therefore, even before the contract of marriage, foresaw the end of Gustavus Fougnies, his brother-in-law, more or less near; and after he had, somewhat tardily, secured the property of his wife by will, he did not hesitate to consult Dr. Semet regarding the chances of life or death which Gustavus might have.

But Gustavus also began to think of marriage. He had already entertained the idea, in 1846, and he was on the point of carrying it

into execution, in the month of last November, when he died suddenly at the mansion of Bitremont, where the prisoners resided, and even in the apartment where he had come to dine with them. They communicated the intelligence the next day to Madame Dudzeele and her daughter, to whom Gustavus was about to be married; and the Countess even charged a servant to "go and tell the two prostitutes that her brother had died of apoplexy." But the state of the body indicated a very different kind of death, since the autopsy exposed upon the anterior part of the nose a deep contusion; upon the left cheek a number of scratches, which appeared to have been made by the finger-nails; over the left maxillary region there was a corrosion penetrating the cuticle, and which seemed to have been caused by some caustic fluid; in fine, upon the tongue, in the mouth, fauces, and stomach, there were numerous traces of the passage of a similar substance.

The physicians (experts) concluded, from these observations, that a corrosive liquid had been poured, during life, into the mouth of Gustavus Fougnies, and had produced a cauterization of the whole of that cavity, and part of the pharynx; that a portion of the liquid, either spilt or rejected, had burned the left side of his neck; and that the marks of violence on the face proved that efforts had been made to force down the liquid, and to stifle the cries of the victim.

On the other side, the Count presented upon the second phalanx of the middle finger of the left hand, a double wound, which penetrated the skin, and which was evidently the result of a bite, since the two lower teeth had penetrated more deeply than the upper.

At the time the investigation took place, on the 22d November, at the chateau of Bitremont, there was also apparent upon the fingers and under the nails a red discoloration, which was too evidently connected with the scratches, of which the face of Fougnies offered numerous traces. All this required an explanation, which was far from being satisfactory; and chemical analysis was not slow in demonstrating that Gustavus Fougnies had been poisoned by nicotine, an organic alkali, extracted from tobacco, and which is one of the most deadly poisons. The indictment also showed that the accused had, for ten months previously, made this poison a particular study; that he had, some days before the death of Gustavus, procured by his labors two small phials of it, which had not been found since the event. Although the Countess herself formally accused her husband of having poisoned her brother; and although the Count himself acknowledged at the time that he had extracted the nicotine

which had destroyed Gustavus, without, however, explaining by whose means it had been administered, we think it may be useful to present a summary of the facts which instigated, preceded, accompanied, and followed the crime of the 20th November.

In espousing Lydia Fougnies, whose patrimony he had over estimated, the Count Bocarmé was far from gaining, for the time being, an opulent position; since he only received from his father-in-law a yearly allowance of 2,000 franks, and he brought, on his side, 2,400.

Such feeble resources did not well accord with a grand domestic establishment, with numerous domestics, and especially with the irregularities of the accused, who, in a short time, had a second household in the environs of Brussels. He thus finds himself obliged to resort to daily loans from his notary, to whom he already owed nearly 43,000 francs of principal; and although M. Fougnies, the father, died in 1845, leaving his daughter a revenue of 5,000 francs, well secured, this increase of fortune was far from assuring the future of the accused, since their expenses were every day increasing; and they had even drawn, since 1846, without repayment, to the amount of 84,000 francs.

All this did not prevent them from owing dribbling debts to the amount of 7,000 francs, some of which dated back to the same epoch; and in which we see figure domestics, or honest journeymen, for sums of 30, 12, 10, or 3 franks. In fine, they had so completely lost their credit, that the Count was seen to pledge for 400 francs, at a pawnbroker's in Brussels, a dress, which was found there again, and which belonged to the Countess. The ruin of the accused was thus imminent, unless the death of Gustavus, on which they had so long counted, should not soon occur to re-establish a fortune so dilapidated.

But Gustavus would not die; he had even formed, since the month of July, new projects of marriage, which the accused violently opposed, and which they sought to break through the mediation of the notary, Cherquefosse. The Countess herself had written to her brother two letters, which were found after his death, and which contained the same slanders against Miss Dadzeele, which she had used in an anonymous letter of the month of August. These attempts, however, had resulted in nothing, and there remained to the Count but the last resort, and the most efficient means for attaining his end.

After having cultivated poisonous plants in 1849, he presented himself in the month of February 1850, under the false name of Be-

rant, before Loppens, Professor of Chemistry at the Industrial School of Gaud, and requested of him the proper apparatus for extracting the essential oil of vegetables, remarking that he had seen the American savages poison their arrows with the juice of certain plants, and that he wished to make some experiments for the benefit of his parents, who lived in the United States. He consulted Loppens, particularly, with regard to the mode of distilling the essential oil of tobacco, that is to say, of *nicotine;* and he had ordered from the brazier, Van den Bergh, according to the instructions of the professor of Chemistry, an apparatus of brass, which he wished to be ready by the 11th of March.

On his return to Gaud in the month of May, the accused showed Loppens the first sample of nicotine, which had not proved efficient. He then recommenced the operation under his eyes, and after having labored two days in his laboratory, he succeeded in obtaining two drops of pure *nicotine.* He returned again after some time, with another sample which had not succeeded any better than the first. Loppens then gave him new instructions, and the accused announced to him at last, on his third visit, in the beginning of October, that he had obtained the most deadly effects on animals.

Nothing now remained but to procure the necessary substances and instruments to operate on a larger scale, and to follow the procedure of Schlœssing, which Loppens had pointed out as the best, and which Pelouze and Fremy describe in their course of General Chemistry.

But these purchases made new journeys to Brussels necessary, which the accused visited on the 16th and 28th of October, and after laboring without interruption ten days and two nights, he at length succeeded, on the 10th of November, in obtaining the two phials of nicotine, which he employed on the 20th, and which could not be found after the death of Gustavus. With regard to the chemical instruments which had served for its preparation, the Count had taken care that they should immediately disappear. The servants of the establishment could give no information with regard to them, and it was not till six months after, that they were discovered in a secret place where the Count had mysteriously concealed them.

This precaution, all will agree, does not well accord with scientific labors, or with researches made for the benefit of another continent.

There is, moreover, the false name of *Berant*, which the Count always assumed, in his interviews with Loppens and Van den Bergh, although he did not conceal his true name at the pawnbroker's shop

in Brussels. We may then safely conclude that he had already in the month of February meditated the crime which he committed in the month of November, and of which his own mother would seem to have had a presentiment, since she said one day to her daughter-in-law, that Hyppolyte was capable of any thing, that he would do some mischief by his chemistry, and that she expected nothing else but to see him some day brought before the Court of Assizes. The diligence with which he labored night and day, moreover, clearly indicated the object he had in view, especially at the period when the idea of marriage had taken possession of Gustavus, and the Countess herself had avowed the object, since she said, in so many words, in reply to one of her interrogations, "My husband meditated the death of Gustavus; it was his fortune that he coveted, it was that which made him decide upon his death; he had lived too long in his estimation. During the first days of November, I know that the poison was prepared for Gustavus; I knew, moreover, that the poison was nicotine. My husband himself told me this in the rear wash-house, the day I saw the large mattress in the vessel of oil, and where he told me he made cologne-water. I used many entreaties to know what he was really proposing, and he finished by avowing that it was nicotine. Some days after, he told me that the first time an opportunity presented, he would not miss Gustavus; and on the 20th of November, on learning that he was coming to Bitremont, he declared to me," added the Countess, "that he would do the business for him that day."

Gustavus, in fact, arrived at 10 o'clock; it only required a single word to save him, and yet the Countess travelled the whole distance with him, without informing him of the dangers which impended. She even gave orders which would insure the execution of the crime, by removing those whose habitual presence would have prevented it. Thus, she made the oldest of the children, and his teacher, dine in the room of the latter, instead of admitting them to the table where they dined every day; and she had caused supper to be prepared for the two smaller children in the apartment of the nurse, instead of in the kitchen, as was their usual custom.

It is true that one can hear from the kitchen what passes in the dining-room. It is also true that he had sent his coachman, Van den Bergh, to Grandnutz, with a letter to the woman Dudzeele, although he had, by the arrival of Gustavus, a horse to take care of, and although the letter had no other object except to inquire of the females what price they would ask for their agricultural implements. There

was no urgency in the message, but the distance to travel over took the coachman four or five hours to accomplish; and when afterwards the Countess ordered her chambermaid, Emerance Bricourt, to serve at table, instead of Van den Bergh, she was careful to order her to withdraw after the second service. Emerance did not appear again in the dining-room until the time when she supposed they would need a light, and the accused, to whom she came to offer it, answered, both at the same time, "*No, no, not yet.*"

On withdrawing, Emerance was going to the kitchen, where the coachman was dining, who had returned from his trip to Grandnutz. The Countess followed her, and made her go up to the nursery, where she found the two nurses, Justine Thibaut and Virginia Chevalier. She had also ordered Van den Bergh to accompany, on the route from Leuze, a distance of about one kilometer,* the cook, Louisa Naes, who would return with him. Van den Bergh was thus sent back on the road for Louisa, but he was not long in perceiving that he would be too late; and as the girl could travel as well alone as with him, and as he had no money to pay for his lodging on the way, he had returned to the house, and informed his master and mistress, who were then in the dining-room with Fougnies.

Gustavus had already manifested an inclination to leave. The Count had even ordered Francis de Blicquy, the gardener, to get the carriage ready, but the stable was locked and Van den Bergh had the key. He had scarcely returned to the house, when the Count went to the kitchen to give the same orders which he had given to Blicquy. The coachman then took his lantern and went to the stable, and the Count returned to the dining-room.

Justine Thibaut was coming down stairs at this moment to get supper for the children, although the Countess had ordered them away from the kitchen, on this occasion, as already stated. Arriving upon the last steps of the stairs, she heard a fall in the dining-room, and the voice of Gustavus, who cried for help, exclaiming, "*Oh, oh, forgive me, Hppolyte*"

She then ran to the kitchen, passing the office which separated the porch from the dining-room, when she saw the Countess go out of the dining-room and enter the office, closing the doors of the two apartments, so as to prevent the cries of Gustavus from reaching the kitchen. The girl being still more frightened at this sight, she hastened to reach the court by a private passage; she then passed

* A distance nearly equal to three-quarters of an English mile.

opposite the windows of the dining-room, from whence issued stifled cries, and she ascended to the children's apartment by an old back stairway. Emerance, whom she found there, then descended to offer her services, but she heard no more noise, and the Countess made her go up again, on seeing her at the bottom of the stairs.

The marks of violence observed upon the body, will exclude the idea of accident or of suicide. They prove, on the contrary, a violent struggle, and when we reflect, that to make the poison take effect upon the victim, it was necessary, at the same time, to open the mouth and restrain the movements of the head to the right and left, which it would otherwise make, it is nearly impossible to admit, that the crime was the act of one person only.

In fine, how can we conceive, that the Count Bocarmé, whose left hand imprinted with a double grip, was held in the mouth of Gustavus, and whose right hand was fully employed in steadying the head and arms, could of himself, and without foreign aid, turn down the mouth a phial of nicotine?

Another person was, therefore, necessarily a participator in the act, and there were only the Count and Countess in the dining-room at the moment when Justine heard the fall and the cries of Gustavus. The accused wrote, as follows, on the 12th of last March, to a correspondent in Paris:—"My wife has requested you to engage M. Berryer; do not do it; and if the engagement is made, suspend it until a new order is received from me, but let her continue in the belief that he is engaged. On this recommendation both her life and mine depend. You can imagine that this wretched woman, after having poisoned her brother, can find no better defence now, when we are both in prison for the crime, than to charge the whole upon me, and to utter against me the most atrocious calumnies. Do not answer this note which I secretly slip into the accompanying letter. Remember that all the letters we receive, are opened. When Berryer shall have engaged to come, explain to him what I have stated to you in this note; show him that the hostile attitude assumed towards me by my wife, is only the result of a moral constraint occasioned by the position in which she finds herself placed, and that his aim should be to defend us both equally against the accusation, and not to take up for my wife in the hostile position she has assumed in regard to me; this would give great plausibility to the charge, and lead us inevitably to the scaffold."

This note, which the accused had fraudulently slipped into an open letter, was not intended for the Judge of Instruction. It expressed

then the secret thoughts of Count Bocarmé, better than they were ever explained in his interrogations; and those thoughts entirely agree with the nature of the crime of which he is accused; it also well agrees with the confidence the prisoner had reposed in the keeper of the prison, since he told him on returning from his first examination, that it was the Countess who had turned the poison into the mouth of Gustavus; that she had made two different attempts in doing it, and had even spilt it on the clothes of her brother.

This explains why she went, a few minutes afterwards, to wash her hands with soap in the kitchen; why she immediately placed the clothes of Gustavus and those of her husband in a copper kettle full of water; and why she caused them to be rubbed and washed in ley, at night, in her presence, by the cook, L. Naes. This also will explain why she caused the crutches of her brother to be washed with hot water; why she even caused them to be burned, saying she could not bear the sight of any thing that had belonged to him; why she had burned his under-waistcoat and cravat at the very moment the justice arrived at Bitremont. This will also serve to explain why she caused the floor of the dining-room to be washed the same evening, and in her presence; why the next day she herself turned oil upon the spots, that they might not be recognized; and why she said, with evident satisfaction, to Emerance, at the time they were making the autopsy, that every thing went on well, and that they had discovered nothing, and would bury Gustavus on the morrow.

These facts are too numerous and too direct for any one to doubt of her being an accomplice, especially when placed in connection with the extrajudicial declarations of her husband, with the special character of the crime, and with the measures the Countess had taken to insure their execution.

This complicity dated as far back even as the time when she had written and signed with the false name of *Beraut*, all the letters addressed to Loppens and the brazier Van den Bergh; and she had even counterfeited his handwriting in several of these letters.

The Countess pretended, it is true, that if she passed the night in causing the traces of the crime to disappear, it was only to save her husband, and the father of her children. But it is very difficult to admit this excuse in regard to so odious a crime, and one too committed against her own brother.

Especially is it difficult to admit it, in presence of almost daily acts of violence, of which the Countess had complained, and to which her husband added the grossest immorality; since we have seen that

he obliged her to receive the fruit of his adultery at the seat of Bitremont.

She also maintained, that if she had concurred in preparing for, or aiding the poisoning, she had only done it under the threats of her husband, and under the influence of moral constraint. But then why did she not, at least, apprise her brother, when a single word might have saved him? Why did she profane his dead body by ordering the coachman Van den Bergh to deluge it with vinegar? Why attach a disgraceful epithet to the ladies, Dudzeele, when she directed a servant to inform them of the death of Gustavus? All this denotes too clearly a common purpose, to attain the same object, which might profit both the accused, and which even the uncle of the Countess openly proclaimed in his deposition, explaining the reasons why he had not been present at the house, the next day, in compliance with the invitation he had received. "I was," he said, "too indignant against them for their infamous conduct, and this indignation had its foundation in the deep conviction that they had murdered Gustavus."

In conclusion, Alfred-Gabriel-Gerard-Hippolyte Visart, Count Bocarmé, and Lydia-Victoire Joseph Fougnies, wife of Bocarmé, are charged with having voluntarily made an attempt upon the life of Gustavus Fougnies, their brother and brother-in-law, at Bury, on the 20th November 1850, by substances which would cause death more or less promptly, or by means which would render them accomplices in the act, whether they gave instructions to commit it, or procured the substance, or did any other act to carry it into execution, knowing the object intended; whether they knowingly aided or assisted the author or authors in those arts which prepared for, or facilitated the acid, or in those which consummated it.

Regarding which the Court of Assizes of Hainaut will decide.

For the Procureur-Général,

Signed E. D. CORBISIER,

May 3d, 1851. *Substitute.*

The discussions respecting this case occupied the Court during twenty-one sittings (from 27th May to the 15th June). M. Bocarmé was found guilty by the jury, and condemned to death, and Madame Bocarmé was acquitted.

Symptoms experienced by Gustavus Fougnies.—These cannot be accurately known, inasmuch as the death occurred in the dining-room of the house at Bitremont, and no particulars ascertained but these. Gustavus died in about five minutes, after poisoning by an unknown

dose of nicotine; he made outcries, but were they before or during the poisoning?

Report of the autopsy of Fougnies, by Doctors MAROUZÉ, ZOUDE, *and* GOSSE.—On the 22d of November, 1850, upon a requisition from M. C. Heughébaut, Judge of Instruction of the Court of Tournay, we, the undersigned, certify that we repaired to the house of Count Bocarmé to examine the body of Gustavus Fougnies of Peruwelz, and to state the cause of the death of the young man.

After accepting the mission, which had been offered us, and been sworn to discharge the duty as men of honor and integrity, Count Bocarmé conducted us to the room where the dead body was deposited; which we caused to be removed to a convenient place, when we proceeded to the autopsy, which gave the following results:—

Examination of the exterior of the body.—The body, which was recognized by several persons present to be that of Gustavus Fougnies of Peruwelz, appeared to be that of a man, about thirty years of age, of a feeble organization, and having but one leg (the left). We observed as follows: 1st. Upon the left cheek, numerous prints of a semilunar shape, with their concavity towards the mouth, and their convexity outwards; in a word, these marks had the form of the print of a nail. 2d. Immediately under the left maxillary region, a corrosion, penetrating the epidermis, which was moreover elevated and detached to the extent of about eight lines; all around the cuticle was removed by the slightest friction; indeed over the whole surface which occupied the whole left submaxillary region, and a portion of the superior cervical region of the same side; thus corrosion appeared to have been made by some caustic liquid. 3d. A deep contusion was seated on the anterior part of the nose; dissection of this contusion displayed a very considerable sanguineous infiltration; in the centre of this contusion was a small wound of the size of a hemp-seed. 4th. Three small scratches situated on a level with the lower jaw on the right side, and only penetrating the cuticle. 5th. A trace of blood chiefly sero-sanguinolent, and little colored, about an inch in extent, situated on a level with the articulation of the third right rib with the sternum; this red serosity, moreover, seemed to have been caused by the burning rather than the contused wound. 6th. The cicatrization of the amputated stump was perfectly healed, and not sweat at any point.

Examination of the interior of the body.—The mouth.—The lips were pale and shrivelled, and covered with a brownish gray crust, and similar crusts filled up the dental interstices. The tongue was large

nearly twice its natural size; its mucous membrane was of a grayish black, and destroyed through the whole extent of its upper surface and along its edges; the slightest touch with the back of the scalpel raised it in small shreds, having little consistence. That portion of mucous membrane covering the lower surface of the tongue, was red and injected. The whole remaining portion of the mucous membrane of the mouth was red, cauterized, and detached with the greatest ease. The mucous membrane of the palate was of a grayish white, cauterized like the other, and readily detached by slightly touching it with the back of the scalpel; and the same was the case with the whole mucous membrane of the fauces. A large quantity of a glairy liquid was found in the mouth. The tonsils were enlarged, especially the left; they had lost their normal consistence, and were divided with the greatest ease. The mucous membrane of the upper part of the pharynx was red and injected; its epidermis easily detached; at its narrow and inferior portion it was red, but entire, and the same was true of the esophagus.

Stomach.—This was red and injected; some blackish patches of injection were noticed, but no ulceration nor perforation; it contained a considerable quantity of food, like pap, of whitish gray color.

The lungs.—These were sound, only they were somewhat more gorged with blood than natural, especially the right one.

The head.—No marks of disease; not even a trace of cerebral congestion.

All the other organs, as the liver, the spleen, kidneys, pancreas, etc., were healthy, and offered nothing worthy of mention.

Conclusions.—From the preceding observations we concluded, 1st. That some corrosive substance had been introduced into the mouth of M. Fougnies. 2d. That this substance was a liquid, is evident from the fact that there was uniform cauterization of the buccal cavity, and especially of the upper surface of the tongue. 3d. That in introducing it into the mouth, or from its ejection from it, this liquid cauterized the left side of the neck. 4th. That the same liquid cauterized the mouth, fauces, and part of the pharynx, in passing over these parts. 5th. That we cannot determine the nature of this fluid, which must be left for Chemistry to seek to discover. 6th. That this fluid had been injected during life, is evident from the large surface upon which it had acted, without regarding the well-marked line of demarcation, or the nature of the lesions it had caused. 7th. That this liquid had been injected after the last meal taken by M. Fougnies, for this organ could not have performed its function in this

state. 8th. That M. Fougnies had not died a natural but a violent death, is shown by the absence of important lesions in the vital organs. 9th. That his death was owing to the continuance and severity of the horrible sufferings produced by the cauterization of the mouth and fauces, and to the violent anginæ, with swelling of the tonsils, and probably spasmodic contraction of the larynx; and chiefly, in fine, to the efforts made to prevent the outcries of the victim, after the pouring of the liquid into his mouth, as shown by the marks of finger-nails upon the left cheek, the position of the nail-prints, and state of the respiratory organs.* 10th. That the deep contusion on the anterior and lower part of the nose, had been made by some blunt instrument.

Believing which, we have drawn the present report, which we sign with sincerity and truth.

Signed MAROUZE, ZOUDE and GOSSE.

Peruwelz, November 27th, 1850.

It is important to compare this description of the state of the organs, with that which has been given by M. Stas; one will be struck with the differences which exist between them. (*See Tongue, Stomach*, p. 180 and 190.)

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* The conclusions of the experts, Drs. Marouze, Zoude and Gosse, are all legitimate and cautiously drawn, with the exception of the 9th. It was well known that M. Fougnies had died within five minutes from some cause, it is equally obvious that the local injury of the mouth, fauces, &c., could not have produced death within that time. There were no decided marks of strangulation present; and as he did not die of apoplexy, or disease of the heart, it would have been inferred that the death was owing to some caustic poison, possessing great power (sedative or narcotic), for it is obvious that no mere irritant or caustic substance could destroy life so speedily. Nor is there any known narcotic, unless it be the alkaloid of aconite, tobacco, lobelia, conium, and perhaps a few others, not to name strychnia, which cannot be called a narcotic. Now, of these, but very few possess any powerfully acrid properties, such as tobacco, lobelia, and conia, which, in fact, are the only fluid alkaloids, and therefore only fitted to produce all the effects noticed in this case. Reasoning thus by exclusion, these experts, it would seem, might have arrived at a safer conclusion than that death was caused by the sufferings produced by a caustic, and the slight swelling of the tonsils, and probable spasmodic contraction of the larynx, &c.,—or to the efforts made to prevent the cries of the victim, as the usual signs of suffocation were absent. At any rate, the case may serve to show the necessity of great caution in drawing our conclusions with respect to the cause of death in such cases; as the ablest medical jurists may err, as happened in the present instance.—TR.

Medico-legal researches.—It would be difficult to convey an idea of the numerous and delicate experiments performed by M. Stas, to resolve the questions submitted to him. I shall only mention those which resulted in the discovery of the nicotine, passing in silence a mass of researches relative to the spots of blood, &c. M. Stas detected nicotine on the tongue, in the alcoholic liquid employed to preserve this organ, the jaw, fauces, and the larynx, in the fluids found in the stomach, in this viscus, in the liver and lungs, on an old pantaloons worn by Francis Bliequy, the workman who aided Bocarmé in preparing the nicotine; in fine, on some planks of wood forming part of the entry of the dining-room, where G. Fougnies had been poisoned. In pointing out the steps which were followed in detecting the nicotine in the organs of Fougnies, in the stomach, for example, I shall dispense with describing the other analysis, the processes employed by M. Stas being in all cases nearly the same.

An attempt has been made to lessen the merit of M. Stas, by saying that he had been placed on the right track by the Judge of Instruction, who had informed him that Bocarmé had been experimenting with tobacco and nicotine. How can we believe, says one, that the Judge of Instruction, who knew all this perfectly, and who was in daily communication with M. Stas, had kept perfect silence with regard to it for ten days? As for myself, who have no reason whatever to suspect the veracity of M. Stas, I may say that I was informed by him, that when he received this precious hint, he had already ascertained that the poison introduced into the stomach of M. Fougnies, was neither sulphuric nor acetic acid, although he had been led to believe for several days that it was acetic acid; he had even arrived at the conclusion, that Fougnies had either swallowed *nicotine* or *conicine*.*

Examination of the tongue, lower jaw, fauces, and larynx.—The tongue was very large and swollen. The mucous membrane on its upper surface presented at the right, from the end, as far as two-thirds of the floating portion, a black or bluish appearance; the rest

* It is exceedingly gratifying to notice this generous defence of M. Stas by Orfila, both distinguished analytic chemists and medical jurists, and the example may be held up as worthy of imitation to scientific men in our own country; who too often, from jealousy or some other ignoble and unworthy motive, are ready to detract from the reputation of a rival, instead of defending it. But true science abhors such selfishness; is noble and generous; ever ready to hail as a friend and brother all who labor to advance its interests, or contribute to its progress.

of the membrane was a blackish gray; on the left, the tongue bore the print of two teeth; in this part blood had been extravasated. We observed, also, some cuts made by a pointed and cutting instrument. The mucous membrane of the lower surface of the tongue was red, injected, and covered with a very viscid liquid, of a yellowish white color; both on the upper and under side, this membrane was much softened; the epithelium was detached with the greatest ease; the substance of the tongue was also much softened, except in the central part, where it preserved its normal consistence.

The state of the teeth would not allow us to suppose that they had been in contact with a concentrated mineral acid.

Chemical examination of the tongue.—It exhaled a decided odor of acetic acid; the fauces and larynx exhaled the same odor; the tongue reddened litmus paper. Distilled water was made to flow for six hours over every part of it. The filtrated liquid was slightly troubled by lime and baryta water, and that of the chloride of barium; this turbidity disappeared in hydrochloric acid. Sulphohydric acid removed from it the rosy tint which it had, and made it opaline without precipitation; nitrate of silver caused a slight precipitate of a yellowish white, which disappeared, in part, in ammonia, and was increased by the addition of nitric acid; the portion not dissolved by the ammonia was flocculent, translucid, and resembled coagulated albumen. This liquid was, in part, introduced into a distilling apparatus, and the mattress plunged into a bath of salt water, when there came over into the receiver a colorless liquid, slightly acid; there remained in the retort a slight residue of a pale yellow, very acid, having the odor of viands. The rest of the liquid was distilled in the same retort, and the product was designated under the name of *the residue of the evaporation of the waters used for washing the tongue.*

The tongue was then cut into fragments (that side which seemed the most affected). These fragments were introduced into a retort, with a certain quantity of distilled water, and heated as we shall describe. The liquid which first came over was again introduced into a retort and heated; the second distillation, added to a certain quantity of water, was again distilled on the matters which remained in the retort; during six distillations it disengaged a very sensible odor of vinegar. The liquid obtained in the receiver, which was very acid, as well as the waters from washing the retort, were again subjected to a third distillation in a bath of salt water. This operation, which continued during three days, furnished in the re-

ceiver a liquid slightly acid, colorless, having the odor of vinegar, and a dry yellowish residuum, with the odor of roasted meat, which was marked *residue of the decoctions of the tissue of the tongue.* The acid liquid was made alkaline by baryta water. No doubt, says M. Stas, after having studied the salt which was formed, that this salt is the acetate of barytes, and that the acid which is volatilized by the distillations above-mentioned, is acetic acid. No doubt, also, that the tongue and fauces contained a notable quantity of this acid.

Examination of the liquids contained in the stomach, the intestines, and the bladder.—These different matters have been preserved in pure alcohol.

At the bottom of the vessel which contained these organs was a soft pulpy mass of a grayish black, in which were observed the debris of meat, of carrots, chicory, &c., partly digested; this mass, very acid, exhaled a tainted odor. It was divided into two equal parts, A and B. The portion A was resumed for further experiments, if any one should find fault with the report. B was mixed with the waters of the washings of the stomach and filtered; the liquid, seen by reflection, was green, and a dirty red, if seen by refraction; it deeply reddened litmus; it became opaline by sulpho-hydric acid, and left a gray flocculent deposit, insoluble in ammonia and nitric acid; the sulpho-hydrate of ammonia acted nearly the same; the water of baryta rendered it turbid, and the precipitate almost entirely dissolved in acetic acid.

It was sought to determine whether this liquid contained a volatile acid; to this end it was distilled in an apparatus without lute or a stopple, at about 100 degrees (cent.); it coagulated and was discolored. The distilled liquid was colorless, of a putrid odor, slightly alcoholic, and acid. When the liquid in the retort ceased to boil in a water-bath of a hundred degrees (centigrade), it was placed in a water-bath saturated with common salt; the retort was kept in it during fifty-two hours; by this means the liquid was reduced to two-thirds its volume; it was then heated over a naked fire; as the liquid was gradually concentrated in the same degree, it became more and more discolored; the matters in solution appeared, moreover, to change; and an enormous quantity of froth was generated. A part of the liquid was removed from the retort, in order to ascertain if the contents of the stomach did not contain some mineral substance, or some organic matter of a poisonous nature capable of change by the prolonged application of heat.

The portion of liquid taken was evaporated in a glass to the consistence of a syrup, which was brown, very acid, and having the smell of wine vinegar; heated by concentrated alcohol, it partly dissolved; the alcoholic solution, filtrated, was evaporated to dryness; the product diluted with cold concentrated nitric acid gave in about fifteen minutes a trace of yellowish matter, having a resinous appearance.

Another part of this liquid was treated with alcohol and evaporated; the product, when cold, was dissolved in a mixture of three parts of nitric acid and one of sulphuric acid, without discoloration.

Another portion became a deep brown by concentrated sulphuric acid, and exhaled the odor of vinegar.

Another portion, left for twenty-four hours in contact with sulpho-hydric acid, deposited a grayish flocculent precipitate, while the supernatant liquid was opaline and orange.

Another portion was discolored with the disengagement of sulpho-hydric acid, by sulpho-hydrate of ammonia, and deposited sulphur.

Water of barytes caused, with one part of this liquid, a turbidity which disappeared with hydrochloric acid.

Nitrate of silver formed with this liquid a sort of yellowish caseous mass, almost entirely soluble in nitric acid; the involatile portion was dissolved in ammonia.

With potash, the liquid became brown, and disengaged an animal and vegetable narcotic odor at the same time. What is the cause of this latter odor?

A sufficient quantity of the liquid was mixed with twice its volume of anhydrous alcohol; at the end of twenty-four hours there was deposited a small quantity of a glutinous mass; this was decanted and evaporated to the extent of three-fourths, without boiling; the product, added to a concentrated solution of caustic potash, was colored deeply brown; the mixture exhaled an ammoniacal narcotic odor, which suggested that of conium, or perhaps still more that of the urine of mice, although the animal odor predominated.

The liquids of the two experiments were reunited in a small vessel, with an emery mouth, and agitated with pure ether. After sufficient rest, part of the ether was decanted into a small glass capsule, and spontaneously evaporated; this left also all round the capsule a very slight liquid ring, colorless, of an animal odor, which afterwards became sharp, very disagreeable, adhering strongly to the throat, and coloring of a deep blue, litmus paper reddened. Taken

up by a new portion of ether, it was left to evaporate spontaneously, when was obtained a small oily ring, colorless, which after a few minutes gave striæ, which gathered at the base of the vessel; the odor of the liquid was very sharp and disagreeable; it produced on the tongue a sensation of burning, which remained a long time, and which extended over the whole mouth, the pharynx, and even the esophagus; it changed to a deep blue reddened litmus paper; it was very soluble in water, and the solution transparent and odorous, changed litmus to blue. We sought to know if these reactions were not owing to ammonia. To this end a reddened litmus paper was dipped in a watery solution of this substance, and also of ammonia; the papers were heated to 150 degrees (cent.); at the end of a minute, the paper made blue by ammonia was restored red, while the other preserved its blue color for about fifteen minutes; at the end of that time, the blue discoloration disappeared in its turn.

The other portion of ether remaining in the flask was decanted into a show glass and left to spontaneous evaporation; the slight ring which had formed was heated by dilute nitric acid, which dissolved it without discoloration, and it remained without color at the end of 30 minutes. Two drops of the same foaming acid changed it immediately to a yellow color. Water acidulated with a thousandth part of sulphuric acid, heated to 100 degrees (cent.) was neutralized by the matter of this ring; the liquor was colorless, neutral to litmus, slightly odorous, like the matter evaporated *in vacuo*, it left a colorless syrup, which would not crystallize; being decomposed by caustic potash and heated by ether, the syrup furnished a solution made volatile by ether; the residue was the same alkaline oily matter, whose taste was so very acrid, burning and persistent, calling to mind that of tobacco, or still more, that of the liquid which is produced by the condensation of the fumes of tobacco when smoked in a pipe * The discovery of this alkali made it necessary to abandon, for the time, the estimate of the acetic acid contained in the stomach.

The rest of the liquor contained in the retort, and forming about four-fifths of the residue of the distillation of half of the contents of the stomach, was introduced into a flagon with an emery mouth, and neutralized by pure caustic potash, which rendered it alkaline; it

* The matter here spoken of, says M. Stas, is that which I made Francis Blicquy smell, and which this witness took for Cologne water (the name given by Bocarmé to nicotine), which the Count had prepared in his presence and with his assistance.

disengaged an odor, at the same time, animal, ammoniacal, and vegeto-narcotic (vireuse). The alkaline liquor was mixed with a part of its volume of ether, and briskly agitated. Abandoned to rest for half an hour, there was no trace of supernatant ether; a new quantity of ether was added, the matter took on the form of a gelatinous mass. A new addition of potash did not cause the formation of two layers; to obtain these, it was necessary to add a portion of water. The difficulty of separating the ether shows, that all the animal matters which were held in solution, had not been precipitated previously by the anhydrous alcohol; indeed, the same difficulty was not experienced, when in using this alcohol it was employed for a longer time. The ether once separated, the matter was exhausted by new quantities of ether (repeated six times), it was then evaporated in vacuo, by the side of a capsule, containing sulphuric acid. Here M. Stas describes with great care the ingenious arrangement of the apparatus which enabled him to collect the ether, and to obtain, at the end of the operation, in the retort, *an alkaline oily matter;* he assures us, moreover, that in examining the sulphuric acid of the capsule, this acid had absorbed a certain quantity of an oily matter which the ether had carried with it.

Properties of the oily alkaloid, obtained by evaporation of the ether.—It was displaced with great facility; its mobility is equal to that of a volatile oil. It remains fluid at 20 degrees (cent.); heated in a show-glass it changed its color considerably, giving off colorless vapors, which turned litmus blue, and which possessed a disagreeable irritating odor, adhering to the throat and producing a sensation of heat and constriction. On approaching it with a glass tube, moistened with a solution of hydrochloric acid, its vapors gave rise to strong white fumes. Exposed to the open air in a covered show-glass, it became colored at the end of 24 hours, losing its fluidity, and ended by changing into a dry matter of a reddish brown color. It produced upon the tongue the acrid taste of tobacco, which was soon followed by a sensation of heat and even of burning, if the quantity was a little larger; this sensation remained for a long time, and extended to the whole mouth, causing the taste of the same matter to disappear entirely. Turned into water, it sank to the bottom forming thiæ, which readily dissolved.

The watery solution was transparent; it was saturated with sulphuric acid; the sulphate was mixed with a syrupy solution of caustic potash, and the mixture thinned by pure ether; it was then decanted and allowed to evaporate spontaneously; there remained a watery,

colorless solution of an alkaloid, having the acrid taste of tobacco. On heating this solution to 100 degrees (c.) vapors were obtained which changed reddened litmus paper blue; the same solution colored the same paper a deep blue; it changed to a brown, paper colored with turmeric, and to a green, that with syrup of violets. In contact with a solution of oxalic acid, containing seven hundredths of this acid, it was neutralized, the neutral liquor was colorless, slightly odorous, and having the acrid taste of tobacco; evaporated in vacuo, over sulphuric acid, it was reduced after several hours to a colorless oil, which did not crystallize at first; but afterwards, heated by water, ended by giving a white mass, having the form of a crystalline vegetation reddening blue paper, because it retained some traces of oxalic acid. The alkaloid was dissolved, when heated with tartaric acid, and the liquid possessed the acrid taste of tobacco, and crystallized imperfectly. Phosphoric acid gave a saline mass of a thick appearance, from which crystalline grains could be separated; when dissolved in alcohol, and the solution acted on by ether, hydrochloric acid formed with it very fine, elongated, needle shaped crystals, which, heated to 100 degree (c.) gave off hydrochloric acid, and changed to a beautiful red. The bichloride of mercury threw down a white precipitate; on heating the precipitate with very dilute hydrochloric acid, there were obtained by evaporation, in vacuo, very brilliant needle-shaped crystals, of a double chloride of mercury and the alkaloid. The hydrochlorate of this alkaloid turned into a solution of chloride of platina, furnished at the end of a few minutes crystals of a beautiful yellow, (quadrilateral rhomboid prisms.) which constituted a double chloride soluble in water. The proto-chloride of palladium gave a chocolate-colored precipitate soluble in an excess of the alkaloid; this syrup, neutralized by a drop of hydrochloric acid, gave a blood-red liquid, which with the addition of proto-chloride of palladium, in quantity equal to that which had been first employed, and left from one day to the next, gave very large flat prisms of a double chloride of platinum and this alkaloid. The chloride of cobalt furnished a greenish blue precipitate, insoluble in an excess of the precipitant; the liquid became colorless and alkaline; and on neutralizing it by dilute hydrochloric acid the precipitate redissolved, and the liquid became a beautiful red color. The chloride of nickel threw down a dirty green precipitate, and the precipitate was not soluble in an excess of the alkaloid; the liquid being neutralized by a hydrochloric acid, the precipitate was noticed to dissolve; the new liquor subjected to spontaneous evaporation furnished very deliquescent

needles, of a delicate green color. Another part of the solution was neutralized by hydriodic acid, mixed with some drops of a watery solution of the bi-ioduret of potassium; it formed a precipitate of the color of kermes, which changed into small oily drops of so intense a red, that they appeared black; washed with water, and left to themselves, they took the form of a crystalline mass formed of needles which decussated each other, and which dissolved in alcohol, which they colored of a blood red. "From the foregoing numerous facts," says M. Stas, "it follows beyond all question that the contents of the stomach contained, in the state of an acid salt, a *very notable quantity of a volatile alkaloid*, of an acrid and burning quality. I shall presently prove that its physical and chemical properties are those of a well characterized organic alkali, *existing in tobacco*, and which is known under the name of *nicotine*. I shall describe also the means I employed to isolate again this alkaloid when contained in the various combinations I am about to mention."

Researches regarding the nature of the acid, which was condensed by the distillation of the contents of the stomach.—M. Stas concluded from his experiments, that this liquid contained a very notable quantity of acetic acid, mixed with a small quantity of butyric acid; to arrive at this result, he saturated the liquid with barytes, and decomposed the acetate by sulphuric acid. The butyric was recognized by treating the syrupy mass with anhydrous alcohol, having the odor of rancid butter, which was caused by the action of barytes on the liquid; this mass, with a small quantity of water added and placed in contact with concentrated sulphuric acid, disengaged the strong odor of butyric acid.

Anatomical examination of the stomach and duodenum, made on the 27th November, seven days after the death of Fougnies.—The mucous membrane was red, and much injected; in the great *cul de sac*, and around the pyloric orifice, were observed large blackish livid patches, circumscribed, which involved the mucous and muscular coats. The serous tunic, rose-colored in its whole extent, was newly covered with vessels, filled with a black coagulated mass resembling blood, which had been treated by concentrated suphuric or hydrochloric acid; as for the rest, the stomach presented no ulcerations nor perforations. The duodenum was very red; there were no livid patches observed, except those in the stomach.

Chemical Examination.

Examination of the alcoholic liquid in which the stomach was

placed.—Two hundred and fifty cubic centimetres* of the liquid in which the stomach had remained during 25 days, were decanted, and an equal quantity of pure alcohol was poured over the stomach. The decanted liquor was turbid, reddish, of a disagreeable odor, animal and acid at the same time; it was acidulated with 36 grs. of crystallized oxalic acid, and introduced into a large porcelain capsule, in which it was evaporated to a syrupy consistence, and without ebullition; during the evaporation, it disengaged a sensible odor of acetic acid. The product was taken up by as small a quantity of water as possible, and the solution was filtered in order to separate the grosser matters. The filter was washed with the water with which the capsule had been washed. The liquid obtained was evaporated in its turn, and made to boil to the consistence of a very concentrated syrup; this syrup was yellow, of a putrid odor; it was repeatedly treated with concentrated alcohol, which dissolved a certain quantity and left the animal matters undissolved.

The clear alcoholic solution was cautiously evaporated to one-tenth its volume. The residue, scarcely colored, and strongly acid, was introduced into a proof-bottle, and a strong solution of caustic potash added to it. The alkaline mixture was treated by ether; the ethereal solutions were then reunited in the bottle and left to rest.

One part of the ether was decanted into a small glass capsule, where it was evaporated in the open air, leaving an oily matter, colorless, and having a strong, disagreeable animal odor, acrid, and more or less suffocating, of a burning taste, and alkaline to litmus. This matter was taken up with ether, which wholly dissolved it. The solution turned into another proof-glass, exposed to the air, reproduced the same quantity of colorless liquid, which was immediately subjected, in vacuo, above sulphuric acid; after ten minutes exposure, in vacuo, the liquid was saturated with sulphuric acid; and the solution of the sulphate introduced into a tube, was decomposed by a solution of caustic potash. The mixture was diluted with ether, which reproduced, by evaporation in the open air, a colorless, oily matter, deprived of its animal odor, but having a disagreeable, pungent, irritating smell, and a burning taste. It presented, in a word, all the properties of the alkaloid, obtained from the contents of the stomach.

From these and other facts, which I pass over in silence, it follows, that the alcohol, in which the stomach had been digested, contained the same alkaloid as was found in this organ itself, and that conse-

* About 83 cubic inches.—TR.

quently the tissue of the stomach was impregnated with this alkali, notwithstanding the two washings with water, to which it had been subjected by M. Stas previous to its being placed in contact with alcohol.

Researches to ascertain if the tongue contained the same alkaloid as that found in the stomach.

Residue of the evaporation of the waters of the washing of the tongue—This was dissolved in as small a quantity of water as possible; to the turbid solution anhydrous alcohol was added, until it produced no longer a precipitate of organic matter. The alcohol after sufficient repose, was decanted into a small capsule of porcelain and evaporated in the open air; a product remained, slightly yellow, acid, of a pungent taste; this was dissolved in as small a quantity of water as possible, and the solution was introduced into a small flagon, and a part of its volume of a solution of pure potass added; the alkaline mixture, of a deep yellow at first, soon changed to a brown; it was then agitated with twice its volume of ether. After being left at rest a sufficient time, a small part of the ether was decanted into a glass vessel, and left to spontaneous evaporation; there remained oily striæ, of a pungent, disagreeable odor, and a sharp, burning taste like tobacco, and which changed reddened litmus to a deep blue. The remainder of the ether was decanted into a proof-bottle with an emery stopper, and kept for determining its chemical properties.

Residue proceeding from the decoctions of the tissue of the tongue.—This was dissolved in water, then filtered and evaporated to the consistence of a syrup—this, which was acid, was mixed with alcohol, until there was no longer any precipitate. The alcohol was then decanted and subje ted to slow evaporation: the product was taken up by as small a quantity of water as possible, and mixed with its own volume of a strong solution of pure caustic potash. The mixture took on a deep yellow hue; it was digested with ether; a small part of the ether was decanted into a glass proof-bottle, and being left to spontaneous evaporation, furnished oily striæ, alkaline, having an animal, pungent odor, and a disagreeable burning taste.

Experiments made with the alcohol in which the lower jaw, tongue, fauces and larynx had been macerated.—The alcohol previously acidulated with oxalic acid, was evaporated at 40 degrees* (centigrade);

* To reduce the centigrade to Fahrenheit, multiply by 9 and divide by 5. —($40 \times 9 = 360\frac{0}{5} = 75^{\circ}$ Fahr.)

it left a yellow syrup, on which fatty matters floated, this was mixed with water and filtered; the liquor was evaporated to the consistence of an extract; and the product was treated by anhydrous alcohol, as long as it took up any of the animal matter which had become insoluble. The alcoholic solution was evaporated at a temperature of 40 degrees (75° F.). The product which was formed was acid, and was dissolved in as small a quantity of water as possible. To its solution, an equal quantity of a strong solution of potash was added, and the alkaline mixture diluted with pure ether. The ether, evaporated spontaneously, after having been decanted, left a notable quantity of oily matter, colorless, having both an animal and disagreeable odor, and an acrid, burning taste; it was strongly alkaline. After having described some other similar experiments, and having placed the oily matter in contact with the bichloride of mercury, the protochloride of palladium, the chloride of cobalt, the bioduret of potassium, &c. M. Stas concludes that the tongue, the fauces, &c., contained in the state of an acid salt, the same alkaloid as the membranes of the stomach and the contents of that organ.

Researches with regard to the Liver.—The liver, cut into fragments, having been pressed, gave out a liquid which was mixed with alcohol in which the liver had digested for twenty days. The brown mixture reddened litmus; it was heated at a temperature of 50 degrees (c.), and 96 grs. of crystallized oxalic acid added; this acid on dissolving, immediately coagulated the liquid; it was filtered, and washed with alcohol. The filtered liquid was limpid and colorless; it was evaporated in a strong current of air at 40 degrees (c.). When, from the evaporation of the alcohol, it was reduced to one-tenth its volume, it deposited grayish flocculi, and there floated a certain quantity of fatty matter, which solidified on cooling. In this state it was filtered; the liquid was limpid, yellowish, acid, and had a putrid animal odor: evaporated, in vacuo, it left a solid, yellow matter, which was divided to be treated with anhydrous and cold alcohol. The alcoholic solutions, after sufficient rest, were decanted into a small capsule, and heated to 30 degrees in a strong current of air; they gave a syrupy product, of a disagreeable odor, slightly colored yellow, in which were observed some mamillary crystals. It was mixed with one-fourth its volume of pure caustic potash; the mixture was repeatedly heated with ether; this, on evaporation, left some colorless oily striæ, opaline, which were the same *alkaloid.*

Examination of the Lungs and the Heart.—The lungs were gorged with liquid and excessively black blood; they presented all

the characters which we observed in the asphyxia. The heart was normal, its cavities filled with black blood, uncoagulated. The lungs, subjected to the reagents already named, and to the processes described, furnished the alkaloid. I believe, says M. Stas, without being able at present to prove it, that the quantity of alkaloid I extracted from the lungs, is greater than that which I found in the liver. I notice this fact, because it is contrary to the opinion, at present so generally received, that certain matters, and above all poisonous substances, concentrate more in the liver than in the lungs or any other organ.

Extraction of the alkaloid contained in the preceding organs.—All the compounds mentioned above, and which were preserved in close-stopped bottles, were diluted or dissolved in water, and introduced, with the waters of the washings of the vessels, into a proof-bottle, and after a strong solution of caustic potash was added, were immediately after agitated and exhausted by ether.

The different ethereal solutions were united, and left in an open vessel a suitable period. The ether was afterwards turned, part at a time, into a large tube of glass, narrowed at one end to a point A, open and bent; it was evaporated by passing through it a current of pure and dry hydrogen gas. In proportion as the ether escaped, it was replaced by a new quantity of the solution of the alkaloid. When all the ether was volatilized, the tube was inclined so as to raise the contracted end *a*. The end was cut with a stroke of a file, and all the liquid contained in this part flowed into the large tube. In this position the narrow tube *a* is introduced into an opening made in a small stopple, which is fitted to an apparatus, composed, at first, of the end of a tube two-thirds of a centimetre* in diameter, and about five centimetres in length; the end of this tube is blown into a globe B, terminated by a straight tube, and destined, the one to serve as a retort, the other as a neck for the passage of the waters to be condensed in another part of the tube serving as a receiver. This last part is a little dilated towards the bottom, in order to retain the condensed liquid; it is contracted at the other end, in order to be closed when the process is ended.

This apparatus, being connected with the tube *a*, the large end of this tube remaining open, is placed in communication with an apparatus for the disengagement of pure, dry hydrogen, by means of a pierced stopple, which is adapted to the tube. By the position

* A centimetre is equal to about four lines.

which the large tube A takes, the liquid contained in it flows into the globe B. The whole being solidly fixed, and the apparatus filled with pure, dry hydrogen, the tube A is heated with the greatest precaution to about 200 degrees (cent.) The small quantity of fluid which moistens the interior surface, passes into the globe B, which is heated in its turn, at first slowly, and then more rapidly. All the liquid contained in it is changed without boiling into colorless vapors, which condenses in the receiver C.

The globe B contains absolutely no residue. "*I thus proved*," says M. Stas, "*that the alkaloid is volatile, without residue and without change.*"

When the distillation was terminated, the narrowed tubes which terminated in the receiver C were cut and closed with a blowpipe.

The receiver contained a changeable liquid, of a light yellow color. It was inclosed in a box, and labelled, "*Nicotine extracted from the organs of Gustavus Fougnies.*"

NOTE.—Wishing to satisfy myself that ether could completely take up from the liquid all the alkaline matter contained in it, I introduced it into a glass retort, to which a receiver was attached, well cooled, and in communication with an apparatus for the disengagement of pure hydrogen. In order to avoid the change which the alkaloid might undergo by the simultaneous action of the air and heat, I at first filled the whole apparatus with hydrogen; I then slightly heated the retort to eliminate all the ether which was dissolved in the liquid; in fine, I proceeded with the distillation, being careful to disengage the hydrogen slowly but constantly. There were condensed in the receiver about 250 cubic centimetres of a colorless fluid, of a strong disagreeable odor, which changed reddened litmus paper to a deep blue; it was completely neutralized by oxalic acid, and afterwards exposed in vacuo, above sulphuric acid; there was left a saline residue, slightly white, with an acid reaction of a saline and pungent taste at the same time. This residue was introduced into a bottle, and treated with anhydrous alcohol; the alcohol, after digesting for fifteen minutes, was decanted upon a filter. The colorless liquid which passed over was evaporated in vacuo; it left an oily ring, with an acid reaction, and an excessively burning taste. This ring was taken up by a small quantity of water; the solution conducted in a tube, and mixed with its volume of a solution of potass. The mixture was agitated with ether. The evaporation of the decanted ether left oily striæ, strongly alkaline, of a sharp odor, and the pungent burning taste of tobacco. The small quantity of the oily matter obtained proved that the ether had taken up almost entirely the volatile alkaloid from the alkaline solution; at least, the quantity which remained is insignificant, compared with that which was taken up by the ether.

[To be completed in our next number.]

PART SECOND.

CRITICAL ANALYSIS.

ART VIII.—*Report on the Mortality of Cholera in England*, 1848–49. London, 1852: Printed by W. Clowes & Sons for Her Majesty's Stationery Office. Royal 8vo. pp. 474.

THIS is the most elaborate statistical work on cholera that has ever come to our notice. It is drawn up by Mr. Farr, assisted by Messrs. Hammack, Thornton, Clode, Cocke, Sorry and Angus, from the official returns made to the Registrar General. It is not our intention to enter into an elaborate analysis of the matter contained in this Report. Such a labor would require more time, and be attended with more labor than we can command on the present occasion. We shall, however, attempt to give our readers a short abstract of such portions of the Report proper by Mr. Farr, as shall furnish them with the main facts embodied in it.

The main body of the Report opens with a few leading remarks on the general hygienic conditions and the usual rates of mortality in the county and town districts of England, &c., in which it is claimed that England is the healthiest country in the world, and in which the following table from the Sixth "Annual Report is cited," where the data will be found for these and other estimates.

England,	22	deaths	annually	to 1000	living.
France,	24	"	"	to 1000	"
Prussia,	27	"	"	to 1000	"
Austria,	30	"	"	to 1000	"
Russia,	36	"	"	to 1000	"

Passing from this, Mr. Farr alludes to the outbreaks of cholera in India and its gradual spread over the Old World—to the prevalence of summer cholera in England in 1846—and then enters upon the consideration of the epidemic of 1848–49 in London, and its spread generally throughout England. Following are sections on the following subjects.

1. *Influence of Sex on the mortality from Cholera.*—"The deaths from cholera among males were 26,108, females, 27,185; it consequently destroyed 1077 more females than males. The proportions were reversed in diarrhœa, which was fatal to 9,637 males, and 9,250 females. The population of England and Wales returned at the census without revision, was on March 31st, 1851, males, 8,762,588; females, 9,160,180. And correcting for increase of population, the mortality from cholera at all ages in 1849, was—

Males 30.2 to 10,000 living, or 1 in 331.
Females 30.0, to 10,000 living or 1 in 333.

"The mortality is thus a shade less among females than it is among males; but the difference is much less than it is from all other fatal diseases in ordinary years; when the total deaths among males is invariably greater than the deaths among females. Thus, in the year 1848, the deaths among males from all causes, amounted to 202-949, of females to 196,851. And in the seven years 1838-44 the annual rate of mortality among males was 2.270, females 2.104 per cent." It is also stated that it is worthy of remark, that at the beginning of the epidemic the deaths of males exceeds the deaths of females very considerably. And, as a general rule, when the mortality from cholera attained a very high rate, the number of deaths among females exceeds the deaths among males.

2. *Mortality at different ages.*—It appears that cholera proved most fatal in the middle period of life. It carried off 3,866 boys under 5 years of age; 3,837 men of 25 and under 35; and 2 old men of 95 and upwards. Dividing the lifetime into 3 stages, the disease carried off 7,673 boys and 7,045 girls under 15 years of age; 14,861 men, and 15,767 women of 15 and under 60 years of age; 3,546 men, and 4,355 women of the age of 60 and upwards. The deaths were thus more numerous in the middle and most active period of life. The proportions of deaths at the several ages are different in diarrhœa; the deaths of children and of old people being much more numerous than the deaths of persons in the middle period of life. Thus the deaths of 6,794 boys and 6,058 girls under 15, of 1235 men and 1398 of the

ages of 15 to 60, of 1607 men, and 1791 women of the age of 60 and upwards, were referred to diarrhœa. It appears to be exceedingly probable that the cases of diarrhœa in 1849, barring a certain deduction, are cases of cholera, with the striking but not essential symptoms suppressed. And it is worthy of observation that this suppression of morbid action occurs at the ages when the organization is most feeble, either because the system is not fully developed, or because it is worn out."

Duration of Cases of Cholera.—The mean duration of fatal cases was 50.44 hours in females, and 49.44 in males. "The woman attacked lived on an average an hour longer than the man. The duration of life, after well-marked symptoms of a fatal attack of cholera have set in, appears to diminish as age advances." The duration of fatal cases of cholera at various ages, were as follows:

Persons of the age of 15 to 35; 50·904 hours.
Persons of the age of 35 to 55; 46·896 hours.
Persons of the age of 55 and upwards, 47·352 hours.

Contrasted with fatal cholera, "fatal diarrhœa is a disease of much longer duration; and it agrees with cholera in being of somewhat longer duration in females than in males; in both sexes, at the age of 15–35, than at ages farther advanced." The duration of fatal cases of diarrhœa at various ages were as follows:

Males, all ages, - - -	16·044 days.
Females, all ages, - - -	16·692 days.
Males and Females, age 15–35, -	18·668 days.
Males and Females, age 35 and upwards.	17·544 days.

Influence of the Seasons in 1831-2 *and* 1848-9.—The two epidemics of cholera in England, it appears, continued fifteen months, they began in October, spread gradually, increased, and then as Spring advanced partially subsided. "The first epidemic descended to the lowest point in May 1832, and rose to the highest pitch in August, when it caused 29 per cent. of the total deaths. The second epidemic descended to the lowest point in April, 1849, and was most fatal in September, when it caused 37 per cent. of the total deaths. It is worthy of remark, that the cholera in both epidemics entered England after the wheat harvest was over, at the close of the hot season, and that it was most fatal in and after the wheat harvest of the year following."

The following table will show the distribution of the deaths from cholera in England, in the two epidemics over the several months.

Months.	Deaths from Cholera in England.		Of the total deaths from Cholera, the proportion, p. cent. in each month.	
	1831-32.	1848-49.	1831-32.	1848-49.
1831-1848.				
October,	?	354	?	·651
November,	97	376	·314	·691
December,	282	375	·912	·689
1832-1849.				
January, .	614	658	1·986	1·210
February, . .	708	371	2·289	·682
March, . . .	1,519	302	4·912	·555
April, . . .	1,401	107	4·530	·197
May, . . .	748	327	2·419	·601
June, . . .	1,363	2,046	4·408	3·761
July, . . .	4,816	7,570	15·574	13·916
August, . . .	8,875	15,872	28·699	29·178
September, . .	5,479	20,379	17·718	37·463
October, . .	4,080	4,654	13·194	8·555
November, . .	802	844	2·593	1·552
December, . .	140	163	·453	·300
Total, . . .	30,924	54,398	100·000	100·000

Influence of Locality.—In reference to this point, we learn that cholera was three times more fatal on the coast than in the interior of the country. This is clearly shown by the fact, that 36,241 of the deaths from cholera occurred in the districts lying against the low navigable rivers and the seas; 17,052 in the interior; "And as the population of the coast districts was nearly seven and a half millions, and that of the part of the country within this circuit ten and a half millions, the mortality in the coast districts was at the rate of fifty, and in the inland districts at the rate of seventeen in 10,000." And further on, it is stated that "the mortality in the great ports was at the rate of 125 to 10,000 inhabitants; in the 125 coast districts with small ports, often inaccessible to ships, the mortality in 10,000 was only fifteen; which is one-eighth part of the mortality in the great, one-third part of the mortality (47) in the secondary ports."

"Cholera reigned wherever it found a dense population on the low alluvial soils of rivers, round the estuaries of the Thames, the Humber, the Mersey, the Severn, the Tumar, and their tributary waters." And again, "The cholera was not generally fatal on the primary geological formations; on the granite, the Silurian, or the Devonian systems; while Herefordshire, however, on the old red sandstones, escaped, Cornwall and the South of Devon, on the same formation,

suffered severely. Plymouth, and the districts around the Sound into which the Tamar flows, was one of the principal cholera fields; but it is a port, and the mouth of a river which rises partially in the millstone grit, forming a part of the carboniferous system."

The Causes of the Mortality in London.—The principal elements which enter into the estimate of the causes of cholera mortality in London are, the supply of water, the drainage and the elevation of the soil, the density of the population, and the poverty of the inhabitants. In this portion of the report the reader will find some curious and interesting facts elicited; and by a unique chart given in the appendix, there can be seen at a moment's glance of the eye, the mean temperature of any week, and the mortality in London for the years 1840 to '49 inclusive. This is an exceedingly curious chart, and by it are elicited facts which it would be exceedingly difficult to express by figures.

The river Thames, it is said, collects the waters of 6,160 square miles of country, and the great body of this water flows and reflows through London in tides. "The contents of the greater part of the drains, sinks, and water-closets of this vast city, and of the 2,360,000 people on its sides, are discharged through its sewers into its waters, which, scarcely sullied by the primitive inhabitants, have now lost all their clearness and purity. The dark, turbid, dirty waters from half-stagnant sewers are agitated by the tides, but are not purified until they reach the sea."

In regard to the effect of temperature upon the waters and health of London, we find the following: "It is a fact well worthy of attention, that after the temperature of the Thames has risen above 60°, diarrhœa, summer cholera, and dysentery become prevalent, and disappear as the temperature subsides. The cholera reached London in the new epidemic form about October, 1848; it prevailed through the winter, and destroyed ninety-four lives in the second week of January, when the temperature of the Thames was 37°; it declined rapidly through April and May; the night temperature of the Thames then rose to 62° in the week ending June 2d; with some fluctuation it went up to 68° in July, and remained above 60° until the middle of September (week ending Sep. 15th). The deaths of cholera registered in each of the sixteen weeks were 9, 22, 42, 49, 124, 152, 339, 678, 783, 926, 823, 1,230, 1,663, 2,026, 1,682. The mean night temperature of the Thames fell to 56°; the deaths from cholera to 839 in the week Sep. 16–22; the temperature generally fell to 38° on the last week of November, when there was only *one* death from cholera registered."

Water Supply.—By referring to this point, it was found that "in the six districts, which are supplied with water taken from the Thames at Kew and Hammersmith, 15 in 10,000 inhabitants died from cholera; and the mortality ranged from 8 to 33. In the 20 districts which are supplied with water from the Amwell, the Lea, and the Ravensbourne, 48 in 10,000 inhabitants died of cholera; and the mortality ranged from 19 to 96. In the 12 districts which are supplied with water taken from the Thames between Battersea and Waterloo Bridge, 123 in 10,000 inhabitants died of cholera, and the mortality ranged from 28 to 205.

Elevation.—That the elevation of soil had a more constant relation to the mortality in cholera in London than any other known element, was a fixed fact. In the language of the Report: "Notwithstanding the disturbance produced by the operation of other causes, the mortality from cholera in London bore a certain constant relation to the elevation of the soil, as is evident when the districts are arranged by groups in the order of their altitude. We place the districts together, which are not on an average 20 feet above the Thames, and find that on the bottom of the London basin the mortality was at the average rate of 102 in 10,000; in the second group, at 20 and under 40 feet of elevation, or on the second terrace, the mortality from cholera was at the rate of 65 in 10,000; in the third group, or on the third terrace, 40 to 60 feet high, the mortality from cholera was at the rate of 34 in 10,000; in the fourth group, 60 to 80 feet high, the mortality from cholera was at the rate of 27 in 10,000; in the fifth group, 80 to 100 feet high, the mortality was at the rate of 22 in 10,000; in a district 100 feet high, the mortality was 17 in 10,000; in Hampstead, about 350 feet high, the mortality was 8, or deducting a stranger infected at Wandsworth, but who died there, 7 in 10,000."

Density.—It appears from this report that density of population, contrasted with elevation of soil, has but little influence as an element among the determining causes of cholera.

Wealth and Poverty.—Upon this head, Mr. Farr says, "I find it impossible at present to establish any definite relation between the various degrees of wealth and of the mortality of cholera, further than that in districts of some elevation, wealth does exert a certain influence on the mortality both of cholera and of ordinary diseases."

The next point which is touched upon in the Report, is the "*Conditions in which cholera is most fatal.*" From this portion we extract the following remarks: "Under any circumstances, it is cer-

tain that in this, as in other zymotic diseases, great multitudes of the people who in one way or another take an average dose of the poison, resist its influence; and it may be admitted that the number attacked bear some proportion to the specific matter in the air, water, or earth of the place where they dwell. This specific matter is known only by its effects; but it has been shown that the deaths from cholera vary in some proportion to the quantity of organic matter in the state so commonly observed in the low parts of low towns. Our generalizations, then, go to this extent, that the cause of cholera is some modification of organic matter; and here is the great practical fact—that *although elevation of habitation, with purity of air and purity of water, does not shut out the cause of cholera, it reduces its effects to insignificance.*

That portion of the report which follows is mainly occupied with the consideration of the different theories, which have been propounded in regard to cholera. This portion, wanting in practical facts, contrasts strongly with the portion, the examination of which has thus far occupied our attention, and which gives character to one of the best and most elaborate statistical Reports ever published.

ART. IX.—*Lectures on the Principles and Practice of Surgery.* By BRANSBY B. COOPER, F. R. S., Senior Surgeon to Guy's Hospital, etc., etc. Philadelphia: Blanchard and Lea. 8vo. pp. 771.

The Principles and Practice of Surgery. Illustrated by three hundred and sixteen engravings, on wood. By WILLIAM PIRRIE, F. R. S. E., Regius Professor of Surgery in the Marischall College and University of Aberdeen, etc., etc. Edited, with additions, by JOHN NEILL, M. D., Surgeon to the Penn. Hospital, etc., etc. Philadelphia: Blanchard and Lea. 1852. 8vo. pp. 784.

THE volume by Mr. Cooper, whose title is given above, contains seventy-five lectures, whose contents are of a practical character, embodying the experience of twenty-five years, during which time he has occupied the position of Surgeon to Guy's Hospital. These lectures were first published as delivered, in the *London Medical Gazette*, for 1848–49. They have been revised and extended for their present form, and we can assure our readers, that they are a clever contribution to the practice and general principles of the science of surgery—a contribution which ought, and we doubt not will, receive the approbation of the profession.

The work of Mr. Pirrie comes to us with extremely modest pretensions. It does not claim "competition with any of the valuable treatises on the same subject already existing," but is put forth as a compendium of the author's lectures, in compliance with a wish repeatedly expressed by his pupils. Having seen the announcement in the preface of the work, we opened the volume with an eye to its compendious character, but we had not extended our examination far, before we found that the treatise goes much beyond the range claimed for it. However well it may be adapted for a text-book (and in this respect it may compete with the best of them); of this much our reading has convinced us, that as a systematic treatise, it is carefully and ably written, and can hardly fail to command a prominent position in the library of practitioners; though not complete in the fullest sense of the word, it nevertheless furnishes the student and practitioner with as chaste and concise a work, as exists in our language.

The following remarks on dissecting wounds, may be cited as a sample of Mr. Pirrie's style:—"Dissecting wounds are frequently received without bad consequences, but sometimes they give rise to serious and fatal results. They are chiefly dangerous when the health of the dissector is impaired from any cause, or when the virus is received from a body, in which the cause of death has been puerperal disease, or acute inflammation of serous membranes.

"In slight cases, where bad results occur, the wound inflames in a few hours, and a pustule forms, which, on bursting, discharges a thin, unhealthy matter, and is converted into an acute ulcer. [The pustule is often umbilicoid, resembling a small-pox pustule. When opened, in the early stage, serum escapes, which is nearly transparent, and the yellow appearance of the pustule still remains, showing that its color does not depend always upon pus, but upon a fibrinous exudation. In a short time, the vesicle becomes large, and is refilled with serum, which, as the inflammation advances, will be found to contain pus. Should it heal by scabbing, the scab will be very thick, and composed in a great measure of cuticle, and will be very slow in dropping off.—Ed.] In more severe cases, erythema, erysipelas, whitlow, or inflammation of the lymphatics of the arm may occur; or chronic abscess with induration, or acute abscess with purulent infiltration, may form in the axilla; and this last complication frequently extends down the corresponding side of the thorax. In very severe cases, the axillary symptoms, commencing with acute pain, and rapid formation of abscess, may occur before much irritation about the wound is perceived. The constitutional vary in in-

tensity. In slight cases the constitutional affection may be sthenic and trivial, but in more severe instances, the asthenic, irritative, or even typhoid type, prevails. In the worst instances, the systemic disorder appears before the occurrence of any very distinct local signs of inflammation.

"The treatment of the wound varies according to its form and the subject from which the virus has been introduced. If the body be that of a person who has died of acute peritoneal or puerperal disease, it is advisable, after washing, to make a perfect excision of the wounded part; to allow oozing to go on for a short period, and if any time has been allowed to elapse between the infliction of the wound, and the performance of the excision, in addition to the above proceedings, to employ suction, and after oozing has ceased, to touch the part very freely with the nitrate of silver, with the view of effecting destruction of any virus that may be lurking in it. In any ordinary case it will be considered sufficient to wash the part instantly, to suck it well, and if it be a mere puncture, and do not bleed, to enlarge the opening slightly with a clean pointed knife, so as to encourage the flow of blood, and thus favor the removal of any matter. The nitrate of silver is frequently employed as an escharotic, after suction, without excision, and is probably useful by destroying or neutralizing the virus, if present, and by forming a crest of coagulable effusion, which prevents the admission of noxious matter. I should never, in any case of poisoned wound, trust to an escharotic alone; and it ought to be remembered, that if the nitrate of silver be used gently, it acts merely as an astringent, and that it is only when it is used very energetically, that it has an escharotic effect. It is advisable for some time to preserve the part at rest, in an elevated position, and to inclose it for a few hours in a soft soothing poultice. [In the treatment of pustules, arising from dissecting wounds, I have found it very serviceable to apply the nitrate of silver freely to the inflamed surface contiguous to the pustule, and to inclose the limb in a large cold poultice of Indian meal. The burning sensation experienced in dissecting wounds is increased by hot adhesive poultices, such as those made of ground flaxseed; but the Indian meal being less glutinous, allows evaporation to take place, while the skin is still kept moist.—Ed.] The digestive organs should be cleared out, the diet attended to, and all sources of local or constitutional irritation avoided. If constitutional or local symptoms supervene, they should be treated according to the general principles already mentioned."

The additions to the volume by Dr. Neill, are judicious; and,

while they render it more complete, greatly enhance its practical value, as a work for practitioners and students.

Art. X.—*On the Surgical Treatment of Polypi of the Larynx and Œdema of the Glottis.* By Horace Green, A. M., M. D, President of the Faculty, and Professor of the Theory and Practice of Medicine, in the New-York Medical College, Member of the American Medical Association, etc, etc. New York: G. P. Putnam. 1852. 8vo. pp. 124.

By the preface of this work, we are told, that it "has been undertaken in order to give the profession the personal observations of the author, on the nature and treatment of two of the most mortal affections of the air-tubes;" and, further on, it is stated, that "the author does not hesitate to express the opinion, and leave it for future experience to confirm or invalidate, that foreign growths have occurred in the opening of the air-passages, in many instances, where their presence was neither expected nor discovered; and that, if the attention of the profession should by any means be directed to this subject, it will be found that the existence of polypus, or other excrescences in these passages, is an occurrence taking place much more frequently, than has been supposed by Medical Practitioners."

Dr. Green reports two cases of morbid growths in the larnyx, successfully treated in his own practice; the remaining cases cited, are principally noticed in the paper of Prof. Parker, contained in 8th vol., N. S., of this Journal. Three cases of œdema glottidis, are reported by Dr. Green, as coming under his own observation, which were treated successfully by strong solutions of nitrate of silver to the affected parts. Dr. Green prefers the method of scarifications. "In treating œdema of the glottis by topical medication, a strong solution of the crystals of nitrate of silver, of the strength of two scruples or a drachm of the salt, to an ounce of water, should be employed.

M. Lisfranc is said to have been the first to recommend and employ the method of puncturing, or scarifying, in œdema of the glottis. The same plan (says Dr. G.) "has recently been adopted in the New York Hospital; and several cases have been reported by Dr. Buck, one of the surgeons of this charity, where scarifications of the œdematous parts, proved, apparently, the means of restoring the patients." Dr. Buck has reported eleven cases, *all successfully* treated by the operation. The mechanical execution of the work is good, and the four plates which accompany it are good specimens of the lithographic art.

PART THIRD.

FOREIGN MEDICAL RETROSPECT.

PATHOLOGY AND PRACTICAL MEDICINE.

Differential Diagnosis of Aneurisms of the Arteria Innominata, and Arch of the Aorta. By Dr. Holland. (*Dublin Quar. Journ. Med. Science.*)—The Conclusions arrived at by the author are subjoined. He offers them as "representing the present state of our knowledge of the differential diagnosis of aneurisms of the transverse portion of the arch, from those of the arteria innominata; and as containing some of the elements of a diagnosis that clinical observation will bring to perfection."

In Aneurisms of the Arteria Innominata.

"1. External tumor is a frequent and early sign, situated generally above the inner third of right clavicle.

"2. Arteries in right arm, and on the right side of neck and head, generally pulsate weaker than those on the left.

"3. Stridulous respiration, cough, dysphagia, alteration in the voice, and dyspnœa, are comparatively rare.

"4. Pain, œdema, and enlargement of the veins, begin in right arm or the right side of neck and head; they may finally extend to the left side.

In Aneurisms of the Transverse Portion of the Arch.

"1. External tumor occurs comparatively rarer and later, situated generally at the left side of, or under the sternum.

"2. Arteries in left arm, and on the left side of neck and head, generally pulsate weaker than those on the right.

"3. Stridulous respiration, cough, dysphagia, alteration in the voice, and dyspnœa, are comparatively frequent.

"4. Pain, œdema, and enlargement of the veins, begin in left arm or the left side of neck and head; they may finally extend to the right side.

"5. Partial loss of motion or sensation in the right arm is a comparatively frequent symptom.

"6. Dislocation of the clavicle, trachea, or larynx, a comparatively frequent occurrence.

"7. Alteration in the intensity of the respiratory murmur occurs but very rarely, and then it is weaker in the right lung.

"8. Abnormal arterial murmurs in the right carotid or subclavian.

"9. Pressure on the right carotid and subclavian diminishes or stops the pulsations of the tumor."

"5. Partial loss of motion or sensation in the right arm is a comparatively rare symptom.

"6. Dislocation of the clavicle, trachea, or larynx, very seldom occurs.

"7. Alteration in the intensity of the respiratory murmur occurs very frequently, and then it is generally weaker in the left lung.

"8. Abnormal arterial murmurs loudest in left carotid or subclavian; heard also along the spinal column posteriorly.

"9. Pressure on the carotid and subclavian, on either side, has but little effect on the pulsations of the tumor."

On the Use of Manganese as an adjuvant to Iron. By M. Pétrequin. (*Bulletin General de Therapeu*)—M. Pétrequin quotes various authors to prove that manganese is a normal constituent of animal and vegetable tissues; and believes that wherever iron is present in appreciable quantity, manganese coexists with it. Hence iron alone will not always succeed in blood-diseases. M. Pétrequin has observed many cases of chlorosis, which have resisted iron as obstinately as anæmia connected with cancer or organic degeneration. Other cases again, after deriving a certain amount of benefit from iron, remain stationary. Others again appear cured as iron, but the cure is not permanent. The remedy required in these cases, M. Pétrequin finds to be manganese. He does not give it or iron alone; but combines them.

It is especially in *diseases of the blood* that ferro-manganic medicines are useful. They have a special action on the vascular apparatus, on the formation of the blood, and on the circulating fluid itself. They do not act merely as tonics or astringents; but are regenerators of the blood. They have succeeded admirably in anæmia following hæmorrhage, operations, polypi, metorrhagia, etc.; also in the chlorosis attending puberty, which is a more common disease than is generally supposed, and occurs even in males. M. Pétrequin has also frequently found the combinations of iron with manganese of benefit in the diseases of women at the critical period. He has often seen, in these subjects, *metorrhagia*, accompanied with an aspect of the surface which would lead to the suspicion of organic uterine disease: the hæmorrhage, however, was but a complication, and the patients, apparently in a hopeless state, have recovered under the use of ferro-manganic preparations, conjoined with tonics and ergotine.

In *amenorrhœa* and *dysmenorrhœa*, the patients often imagine that

they require to be bled; but care must generally be taken not to comply with this request. M. Pétrequin has more than once seen cases of amenorrhœa with severe chlorosis, in which it has not been desirable to hasten the appearance of the catamenia—the consequent loss of blood aggravating the disease. The general state of health must here be carefully attended to. Œdema of the lower limbs sometimes occurs in these cases; but it is a less severe complication than when it attends metrorrhagia. It often disappears, as the patient recovers, under the use of iron and manganese.

These medicines are no less efficacious in the treatment of *anæmia* resulting from prolonged intermittent fevers, prolonged suppuration, strumous, syphilitic, or cancerous affections, phthisis, etc. Pills and the syrup of the iodide of manganese and iron are preferable in these cases.

In all these cases, the ferro-manganic preparations do not merely act on the stomach and nervous system, but they are absorbed, and assist in the formation of hæmatosine and new blood-globules, so as to restore the blood to its normal condition. Their effect in this way is greater than that of iron alone.

In the *functional affections of the heart* connected with chlorosis and anæmia, and which must not be mistaken for organic disease, a combination of iron and manganese with digitalis and other moderators of the heart's action is advantageous. The same remark applies to the *functional disorders of the lungs*, attending the same constitutional states.

Disordered states of the nervous system are intimately connected with those of the blood. M. Pétrequin has found that the ferro-manganic preparations succeed well in these, even though uncomplicated with chlorosis. He, as well as M. Gubian, has observed that iron is here better tolerated when combined with manganese. He has also seen benefit from the use of iron with manganese in many cases of *dyspepsia*, *gastralgia*, and *gastro-enteralgia*. Nervous affections of the digestive organs are often the result of chlorosis; and, where stomachics and cinchona have failed, iron has often been found (especially the carbonate, by some English physicians) to be of service. Gastrodynia complicating chlorosis has often yielded to the use of ferro-manganiferous water, and to pills of carbonate of iron and manganese.

In *nervous affections connected with exhaustion* from venereal excesses, onanism, rapid growth, &c., as well as in leucorrhœa, diabetis, &c., M. Pétrequin has a high opinion of these medicines. He is continuing his researches on their action in certain cases of sterility from asthenia, and in some hyposthenic affections of the scalp, such as early baldness, alopecia, &c.

M. Pétrequin has confined his observations to a limited number of the ferro-manganic preparations; and has made many observations before publishing the formulæ which he finds most useful. Having found, even at an early period, that the medicines were liable to adulteration, he has availed himself of the assistance of competent

pharmaceutists. Since the publication of his first memoir, in 1849, these medicines have been extensively used in the south of France and in foreign countries.

The formulæ are few, and correspond to the preparations of iron generally used in France. They are: 1. *Pills* of carbonate of iron and manganese, or iodide; 2. *Lozenges* of lactate of iron and manganese; 3. *Syrups* of lactate or of iodide of iron and manganese; 4. Ferro-manganic *chocolate;* 5. *Effervescing solution* of iron and manganese.

It has been observed that manganese not only preserves water, but purifies that which has undergone change (Martin-Lauzer). Ferro-manganic waters (of which there are many in France and other parts of the continent) can be preserved and carried to a distance;—which cannot generally be done with simple ferruginous waters.

M. Pétrequin commences by giving the powder of iron and manganese, with some vinous drink; he then administers two pills daily, one before breakfast and one before dinner, replacing them soon by the lozenges. The syrups and chocolate complete the treatment. He gives the medicines at meal-time. The syrup he gives before breakfast, in doses of a tea-spoonful; and he finds it useful to administer directly after it some infusion of centaury, or of camomile flowers and orange.

Large doses are unnecessary and useless; for they are liable to produce irritation of the stomach and exhaustion of the nervous system; and the reparation of the blood is slow and progressive, and cannot, even were it desirable, be effected rapidly. Besides, the iron and manganese are not absorbed in any greater quantity, if large doses are given.

Preparations of Manganese and Iron.—M. Burin-Dubuisson of Lyons, who prepared most of the ferro-manganic combinations used by M. Pétrequin, has published an interesting *brochure*, in which he gives the necessary details relating to the subject. The following formulæ are extracted from it.

Powder for Effervescing Solution of Manganese and Iron.—Take of coarsely powdered bicarbonate of soda, 20 parts; tartaric acid, 25 parts; powdered sugar, 53 parts; finely powdered sulphate of iron, 1½ parts; finely powdered sulphate of manganese, ¾ parts: mix carefully, and keep in well stopped bottles. A teaspoonful is mixed with each glass of wine and water drunk during meal-time.

Pills of Carbonate of Iron and Manganese.—Take of pure crystallized sulphate of iron, 75 parts; pure crystallized sulphate of manganese, 25 parts; crystallized carbonate of soda, 120 parts; honey, 60 parts; water a sufficient quantity. Pills of 20 centigrammes (3 grains) are made; they keep easily, without becoming oxidized, in well-closed vessels. From two to four are given daily.

Ferro-manganic Chocolate.—One part of carbonate of iron and

manganese is first mixed with four of sugar, and divided into large lozenges; of these, 100 parts (grammes) are mixed with 500 of chocolate paste, in the preparation of which 100 parts of sugar have been left out. This will make 800 lozenges, each of which contains about 3 centigrammes (nearly half a grain) of carbonate of iron and manganese. The chocolate decomposes the hydrated carbonate of manganese and iron of the saccharate into hydrated sesquioxide of iron and manganese; there is no metallic taste.

Syrup of Lactate of Iron and Manganese.—Take of lactate of iron and manganese, 4 parts; powdered sugar, 16 parts; rub together, and add of distilled water, 200 parts; dissolve rapidly, and pour into a matrass over a water-bath, containing 384 parts of broken sugar: filter the solution. This syrup contains about fifteen parts of lactate of iron and 5 of lactate of manganese in 3,000 parts. One or two spoonfuls are taken daily.

Lozenges of Lactate of Iron and Manganese are made by adding 20 parts of the lactate to 400 of fine sugar, with a sufficient quantity of water. The mass will make 840 lozenges; of which six or eight are taken daily.

Syrup of Iodide of Iron and Manganese.—M. Burin-Dubuisson forms a solution of iodide of iron and manganese, in the proportion of one part by weight to two of water: the proportion of the salts is about three of iodide of iron to one of the iodide of manganese. Six parts of this are mixed with 294 of simple syrup; of this, M. Pétrequin gives one or two spoonfuls daily.

Pills of Iodide of Iron and Manganese.—Take of the officinal solution prepared by M. Burin-Dubuisson, 15 parts (grammes); honey, 5 parts; some absorbent powder, 9½ parts. Divide into 100 pills. The honey and the solution are first mixed, and evaporated at first rapidly, then more slowly, to ten parts. Then add the powder, and divide the mass into four parts, which must be rolled in powder of iron reduced by hydrogen; each of these must then be divided on an iron plate into 25 pills, and again rolled in the iron powder. Finally, they are covered with a layer of tolu, according to M. Blancard's process.

All these preparations must be made very carefully. M. Burin-Dubuisson has ascertained that the commercial salts of manganese frequently contain copper, and even arsenic; he hence insists on the necessity of calcining the sulphate of manganese, twice, or more frequently, at a dark red heat, and of carefully testing the solution.—*London Journal of Medicine.*

On Eczema Impetiginodes in Children. By Dr. Mauthner.—Cases of variola and of eczema impetiginodes were often observed during last winter in the hospital in Vienna. The latter disease had several points of resemblance with variola. Vesicles were formed, filled with a turbid purulent fluid; these were developed into pustules; and finally desquamated. The disease promoted the develop-

ment of scrofula, where a marked predisposition existed; but it freed the body from local scrofulous affections. None of the children died. Mercurial ointment was applied on linen rags to the eyes, the labia majora, and the nostrils, to arrest the excessive development of the disease. In several cases, rigors occurred on the ninth day of the vesicles. If any threatening symptoms—as coldness of the skin, blueness and collapse of the pustules—appeared during the stage of suppuration, full doses of camphor were given with excellent effect. During desquamation, albumen was found in several cases in the urine, which was pale and generally alkaline. Traces of albumen were also observed in other diseases of children, as in typhus and tubercular exudations. In none of these cases was there dropsy. Hæmaturia occurred in one child, affected with dropsy, eczema impetiginodes, and scrofulous disease of the cervical vertebræ. This patient recovered from the urgent symptoms.

The treatment consisted in wrapping the parts affected in cotton wool,—or still better in silk wadding,—and in the administration of Fowler's solution of arsenic. Dr. Von Mauthner gave six drops daily for a fortnight to a child four years old. On the fifteenth day, diarrhœa, and cough with fever, appeared; but these left the patient in two days; and the child was perfectly cured at the end of two months. Inunction with bacon has proved serviceable in eczema furfuraceum.—*Lon. Jour. Med. from Jour. Für Kinderkrankheiten.*

SURGERY.

Cases of Recovery after Fracture of the Base of the Skull. By Henry Lee, Esq.—Mr. Lee gives the particulars of five cases, in which the evidence was more or less conclusive, of fracture of the base of the skull, and in which the patients subsequently recovered. Such cases have been by many surgeons supposed occasionally to occur, but for obvious reasons their real nature is not easily demonstrated. An opportunity however in one case presented itself to Mr. Lee, of examining the parts six months after a fracture of the base of the skull, and the bone was found to have become re-united.

In four of the five cases mentioned by Mr. Lee, some degree of paralysis of the nerves of the head remained after the other symptoms had disappeared. This is attributed to the influence exerted upon the nerves by the injured bones with which they are in contact. "In some cases the sheath of the nerve is probably at first only affected; in other cases the nerves themselves may be so bruised (as sometimes happens to the spinal cord in cases of fracture of the spine) as permanently to lose their power. In other cases, again, the nerves may be torn across by the displacement of the fractured portions of bone through which they run. A local paralysis or loss of sensation will then ensue, quite distinct in its origin and effects from that produced by concussion or compression of the brain. In such instances, the loss of nervous energy is not necessarily attended by any disturbance of the system. The parts to which the nerves are distributed may, however, be more or less affected as regards

their nutrition and secretion, as well as their sensations and motions. In one of the cases given by Mr. Lee, the cornea of the left eye had become opaque five months after the accident.—*Lon. Med. Journal.*

Iodine Injections in Ascite. By M. Boinet.—Notices have from time to time appeared in the French journals upon the treatment of ascites by iodine injections, some of which we have transferred to our pages. The chief advocate of the practice is M. Boinet, who has published a long memoir on the subject (*Gazette Médicale*), the completion of which has recently appeared. In this concluding paper a *resumé* of his experience is given, from which it appears that he has performed the operation in thirteen cases, eleven of which were successful. No injurious consequences followed the injection in any instance, if we may believe the reports; and one injection was generally sufficient. The deductions with which the author concludes his memoir are these;—1. That various fluids may be injected into the peritoneum without danger, and with manifest benefit, in the treatment of ascites. 2. That, of these various fluids, the tincture of iodine is indisputably the best, of which an abstract is given in the *Archives Generale.—Dublin Medical Press.*

MIDWIFERY AND DISEASES OF FEMALES.

On Abdominal Tumors during Pregnancy. By M. Morisseau. (*L' Union Medicale*).—On two occasions, Dr. Morisseau writes, I have had an opportunity of observing the result of abdominal tumors during pregnancy. More recent facts have awakened my recollection, and fixed my attention.

A woman, aged 28, married for eight months, had become pregnant four months after marriage. For several years she had a swelling on the right side of the abdomen. It was painless and movable, offering no impediment to the functions of the abdomen; but it now became adherent and painful. In the seventh month, the woman died of marasmus. For a month before her death, she had had purulent alvine evacuations; but the size of the tumor appeared very slightly diminished. The tumor was found to be filled with pus, to be adherent to the mesentery, and to have an opening into the ascending colon. The fœtus was in a state of putrefaction.

A woman, aged 30, who had had two children, became pregnant for the third time. After the second pregnancy, she had what she described as a ball in her abdomen. This tumor went on growing with the product of conception; and, in the fifth month, became so painful as to render motion insupportable. After suffering extremely for four months, in a state of marasmus, she was delivered of a small, living, skeleton-like child. Both mother and infant died a few hours after. Towards the eighth month of pregnancy, I perceived a tumor of the size of the head of a fœtus at full term, seated in the right flank, and distinct from the uterine tumor. At the autopsy, the peritoneum was found to contain a large quantity of sero-purulent fluid, with albuminous flocculi floating in it. The small intestines

were mottled and friable. Above the right ovary, the tumor raised the intestines, and was adherent to them by the whole of its anterior surface. It was divided into cells, which, for the most part, did not communicate, and was filled with a large quantity of very fetid greenish pus. The base was at the mesentery. The uterus appeared healthy.

Some time ago I was consulted in the case of a woman, aged 24 or 25 years, who had been married some months, to determine whether she could, without danger, become pregnant. She had for some years had an enlargement in the abdomen. The tumor was of the size of a large orange, painless, and could easily be moved from the right side, its ordinary position, to the left. I expressed my opinion that pregnancy would be attended with severe accidents; but different advice was given by another *confrère*, and the patient became pregnant. A month after conception, the tumor became painful, and larger. Towards the end of the second month, the patient was obliged to remain in bed; not the least pressure could be borne; obstinate vomiting and colic set in; and, for ten days, the patient was in a most precarious state. On the seventieth day of pregnancy she expelled the fœtus. For a month she remained dangerously ill, but at length became slowly convalescent, the tumor remaining large and tender.

These facts are worthy of attention. Pregnancy necessitates increased activity of circulation in the uterus and in the neighboring parts. When the uterus is developed, it impedes the flow of blood, as is proved by œdema, and varices in the lower extremities. In the abdomen, too, there is a plethoric state of the organs; hence, if a ganglion is already hypertrophied, or there be a tumor of any kind in the abdominal cavity, it will be liable to become enlarged.

Is it, then, prudent to advise marriage to a female who has a tumor in the abdomen? I have not hesitated, and would not hesitate, to reply in the negative.—*London Journal of Medicine.*

On a new mode of operating for Ovarian Dropsy. By I. B. Brown, Esq. (*Dublin Med Press.*)—This operation consists in the excision of a portion of the cyst, returning the remaining portion into the peritoneal cavity, and closing the wound by sutures, thus allowing any fresh fluid secreted by the remaining portion of the cyst to escape into the cavity of the abdomen, there to be taken up by absorption, and discharged by the kidneys. Mr. Brown said this method of treatment was suggested to his mind by reflecting upon the numerous cases on record, in which a spontaneous cure has occurred by an accidental rupture of the cyst, followed by a copious discharge of urine. This mode was not considered applicable to every case, nor was it the purpose of the author to lay down any absolute rules for its use, but simply to relate such facts as had come under his observation.

Case 1.—This case had been alluded to on a former occasion, and Mr. Brown now read the notes of the case as they were taken by Mr. Bullock, at St. Mary's Hospital, where the operation was performed.

The woman, aged 47, was subject to prolapsus uteri, which Mr. Brown considered as presenting a sufficient objection to treating the case by pressure. The swelling first appeared rather on the left side, about nineteen years ago, but had increased rapidly during the last six months. The following was her condition on admission to St. Mary's Hospital, February 13, 1852:—Abdomen considerably enlarged, with shooting pains extending to the shoulders. Complete procidentia uteri, returned with difficulty. Percussion dull in front, resonant at the sides, less so on the left than the right; fluctuation very distinct, the integuments moving freely over the tumor.—Feb. 14th: Ordinary diet; porter, one pint; blue-pill, three grains; compound aloetic pill, four grains, every night, with saline diuretics.—March 6th: General health good; some fluid drawn from the cyst with a small trocar was quite clear, with only a trace of albumen and some chlorides.—10th: She was placed under the influence of chloroform, and an incision was made through the integuments, down to the linea alba, from an inch and a half below the umbilicus, extending four inches. The linea alba was then divided, afterwards the transversalis fascia, and finally the peritoneum; the cyst was then presented to view, and found to be free from adhesions. It was seized by a pair of forceps, a large trocar was introduced, drawing off about sixteen pints of fluid, leaving some fluid in the cyst, and then a piece of the cyst which appeared comparatively free from blood-vessels was excised. The external wound was closed by interrupted sutures, the ligatures including all the abdominal parietes except the peritoneum. She was ordered two grains of opium immediately, and one grain every three hours. A pad of wet lint was placed over the wound, and a broad bandage round the abdomen. Severe peritonitis ensued for the first five or six days, which was subdued completely by large and repeated bleedings from the arm, with calomel and opium. In eight days the abdominal tenderness had subsided, the abdomen became flaccid, and the urine passed exceeded in quantity the fluid swallowed.—By the 21st (eleven days after the operation), the remains of the cyst could be felt on the right side of the cicatrix, as a solid substance of an irregular form. On the 3d of April, no increase of the abdomen could be discovered, and on the 6th she was discharged. Mr. Brown said he expected that the kidneys would continue to secrete more fluid than was drunk for some time, and that the cyst would ultimately become of an indurated, perhaps calcareous character, possessing less vitality, and incapable of secreting fluid. He should feel himself bound to report to the Society any return of the disease, although he did not anticipate a relapse.

Case 2.—In this case, which had been treated nine years ago by tapping, pressure, mercurials, and diuretics, so far successfully that no return of fluid took place for seven years, the abdomen had been gradually enlarging for the last two years, and the patient was anxious for a radical cure, and sanguine as to the result of the operation of excision of a portion of the cyst. She was previously prepared for the operation by a farinaceous and milk diet, avoiding stimulants,

and keeping the bowels well open daily, under which treatment the size of the abdomen was materially reduced. The operation was performed on the 29th of March, 1852, in a manner similar to that related in Case 1. Nine pints of clear fluid were withdrawn, and a portion of the cyst excised. But it unfortunately happened that the peritoneal coat of the cyst was very vascular, and hæmorrhage ensued which was not to be subdued by torsion of the vessels. As there were no adhesions, it was determined to remove the whole cyst. A double ligature having been tightly applied over the pedicle, which was attached to the left ovary, about an inch and a half broad, and containing one large blood-vessel, the pedicle was divided, the cyst removed, sutures applied, and over them a many-tailed bandage. The case did very well, no signs of inflammation occurred, the ligature came away in four weeks, and on the day following the patient was in her drawing-room, convalescent. This case was related, as illustrating an important difficulty which might occur, rendering the removal of the whole cyst a safer practice than tying several bleeding vessels, and leaving the ligatures within the peritoneum, a source of much danger.

Case 3.—In this case the operation was performed in a similar manner to that detailed in Case 1. A portion of the cyst was excised, but a second large cyst was found, the fluid of which was evacuated, and the wound closed. An attack of inflammation ensued, which was successfully combated by bleeding, calomel, and opium, and the patient did well. The first cyst became collapsed, and could be easily felt beneath the walls of the abdomen; but the second cyst has frequently filled since; and now, sixteen months after the operation, it fills at a much slower rate, and the patient's health is much improved. Steady and firm pressure has been had recourse to after each tapping, to which Mr. Brown attributes mainly the slower filling of the cyst. This case was related to show another complication which might occur.

Mr. Brown concluded by expressing a hope that this operation may prove to be another successful method of treating this very troublesome disease.—*Lancet.*

On the Diseases of the Follicles of the Vulva By M. Hugnier. (*Jour. des Connais. Med. Chir*).—Inflammation of the follicles of the vulva is more frequent in summer than in winter. Brunettes and scrofulous subjects are predisposed to it; but pregnancy is a special predisposing cause. Fatigue, diet, and irritant pomades also favor its production.

Symptoms.—In the eruptive period there is itching; the genital organs are more or less red and swoollen, and they present here and there, especially on the genito-crural folds, on the external surface and free border of the labia majora, on the base of the envelope of the clitoris, and on the nymphæ, very small red projections, which are easily felt, and vary from the size of a pin's head to that of a sweet pea.

At a more advanced period, there is irritation and pain, especi-

ally during walking; and there is excessive secretion in the genital organs, with a strong odor. After a longer or shorter period, the follicles secrete pus. The little swellings become redder at the base, also larger and more projecting; they then become pale and yellowish; the pus then appears beneath the epidermis, and the pustules burst. The follicle may either cicatrize rapidly, or remain open, presenting a small superficial circular sore. This kind of ulceration may be confounded, if care be not taken, with those of syphilis. The pustules, when arrived at the suppurative period, do not all burst. Absorption of the pus may occur in some cases; for some time the follicle remains red, hard, and inflamed; and its central part, if exposed to the air, is covered with a small crust.

The disease may present its various stages at the same time on different follicles.

Inflammation of the follicles is not always so simple as has been described. In pregnant women, or in those predisposed by diet, fatigue, or long walking, the vulva is more or less swollen; its different parts are red, glued together, and covered with a gluey, gray, whitish, or purulent matter, resulting from the mixture of sweat, sebaceous secretion, and pus. Excoriations soon appear, chiefly on the genito-crural folds, and on the free edges of the labia majora and nymphæ In this state the genital organs of the female, from which emanates a most repulsive odor, present such a hideous aspect, that it is easy to understand how some practitioners have mistaken the true nature of this disease, and others have believed it to be syphilitic.

Diagnosis.—In some cases, inflammation of the vulvar follicle is readily distinguished from erythema, eczema, acne simplex, erysipelas, and small furunculous abscesses; but it may be confounded with herpes, ecthyma, and especially with syphilis.

Herpes is distinguished from inflammation of the follicles, by being always preceded by derangement of the general health. It is, moreover, characterized by an eruption of robust vesicles, large from the commencement, while those of folliculitis are at first small. In herpes, the vesicles are superficial, lying beneath the epidermis; they are neither red, nor surrounded by any inflammatory areola; they burst, wither, and dry up very soon, most commonly without suppurating; when they do suppurate, the pus which they contain is rather an opaline matter mixed with serosity, giving it the appearance of whey, than true pus. When the vesicle of herpes is torn and the epidermis removed, there is a slight excoriation, without a depression, or at most with a scarcely sensible one. In vulvar folliculitis, the ulceration is deeper, but less extensive. Pressure on the follicle often causes the exudation of pus, or of sebaceous matter, sometimes both together; the lacerated vesicle of herpes gives exit at most to a little reddish or sanguinolent serosity. Herpes leaves no cicatrix; the other disease often does. And the two affections differ from each other in their progress and duration.

Ecthyma, in its simple form, has more analogy than herpes with

folliculitis. It is, however, often the result of general derangement of the health. It is never developed on the nymphæ, on the interior surface of the labia majora, or on the perineum, and very rarely in the genito-crural folds. When ecthyma attacks the vulgar, it is situated on the clitoris or free edge of the labia majora. It rarely is present alone on the genital organs; for the surface of the body generally also presents traces of it. The pustules of ecthyma are less numerous and more superficial and larger than those of folliculitis; they sooner suppurate, and are covered with a thicker yellow crust In ecthyma, the eruption does not present successive stages. Moreover, in this disease the vulva follicles are found healthy, and there is no hypersecretion of fat and fetid matters.

Syphilis—It is chiefly with the various forms of syphilis that folliculitis of the vulva may be confounded; and this is a serious error. M. Huguier remembers with pain the case of a young married woman, weak, and in bad health, who was driven from home when about to become a mother, through a mistake of this kind, committed by the physician under whose care she was.

In some cases, errors may be committed. In the early stage of folliculitis, when the inflamed follicles form pimples which may be accompanied by a discharge from the genital organs, the disease very much resembles those mucous tubercles which present themselves at first under the form of red shining papules, more or less numerous, small and round, like the inflamed follicles. A little later, when the follicles contain pus; when their aperture remains open, and gives exit constantly to purulent and sanious matter; when the neighboring parts are excoriated here and there; when various parts of the vulva are irritated, and produce excessive secretion, accompanied with a discharge from the vagina or uterus,—it is very easy to confound folliculitis with primitive syphilis, characterized by incipient chancres and blennorrhœal discharge. The peculiar nauseous odor is almost the same in both; and in both there may be engorgement of the inguinal glands.

There are, however, certain different characters. Folliculitis frequently occurs during pregnancy; syphilis is most common when the uterus is empty. Folliculitis commonly follows much fatigue, excessive masturbation, and too frequent sexual indulgence. Syphilis is never the consequence of either of these, nor of uncleanliness. With some exceptions, it only appears after a suspicious intercourse. The promotive seat of syphilis is usually at the entrance of the vagina, at the base of the anterior surface of the nymphæ; folliculitis commences indifferently on any part of the vulva. Syphilitic affections of the vulva are very often accompanied with inflammation and hypertrophy, and with fissures of the anal folds. These parts are generally intact in folliculitis; hæmorrhoids, if they exist, will not be mistaken for venereal complications. Folliculitis presents successive eruptions of pustules in various stages, which produce much less destruction than those of syphilis, the excoriations and ulcerations being always superficial or very limited. Venereal ulcerations

rapidly increase and form chancres, extending in various directions, and perhaps running together. Mucous tubercles, when of primary venereal origin, coexist with other indications of syphilis; when connected with secondary disease, the history of the case, and the appearance of other symptoms on various parts of the body, will point out their nature. Yet there may be cases, in which it will be very difficult to form a diagnosis.

Folliculitis is liable to return; sometimes it appears to be habitual. In some cases, M. Hugnier has seen it return three or four times a year.

Treatment—After removing the cause, the remedies to be employed are demulcent lotions, hip-baths for twenty minutes or half an hour, and simple or opiate cerate. Rest, vegetable diet, and a refreshing ptisan, are also indicated. If these means fail, we must apply a poultice of potato starch, covered with a piece of gauze, and bathe the parts with wine and water, or with decoction of roses, bistort, or rhatany. Cold hip-baths are also very useful. When the disease is obstinate, the parts must be treated with a strong solution of nitrate of silver, with a mixture of one part of acid nitrate of mercury in two of water, or, still better, with solid nitrate of silver, which must be held longer over the most diseased parts.

Constitutional treatment must not be neglected. If the patients are scrofulous, and the disease appears liable to return, tonics and astringents must be given. Moderate exercise and nutritious diet are also advisable. Careful attention to cleanliness, moderate diet, and occasional purgatives, are indicated for dark-complexioned patients, with a very oily skin, whose perspiration has a strong odor, and who often have pustules of acne on the shoulders.

The follicles of the genital organs are also liable to present other forms of disease, which M. Hugnier, in an essay presented to the Academy of Medicine, has ranged under the head of acne, and stertomatois and sebaceous cysta of the vulva, and hypertrophy and exdermoptosis of the vulvular folicles.—*London Med. Jour.*

Conclusions derived from an Analysis of one hundred cases of Cancerous Disease of the Uterus. By Robert Lee, M. D.—The conclusions to which the author arrived from this analysis were:—1st. That cancer may commence in any part of the mucous, muscular, or peritoneal coats of the uterus; but most frequently in the os and cervix. 2dly. That the earliest symptoms of the disease, in a large proportion of cases, were discharges of sanguineous, serous, or white colored fluid from the vagina, with sense of uneasiness or pain more or less acute within and around the pelvis. 3dly. That cancerous disease of the uterus presented itself most frequently in the form of induration and ulceration of the os and cervix uteri and vagina, or ulceration without induration, or in the form of fungoid tumors, usually called cauliflower excrescences, growing from one of the lips or the whole os uteri, being often associated with encephaloid or colloid masses and true scirrhus of the remaining portions of the uterus and

contiguous viscera. 4thly. That in no case could cancerous disease of the uterus be referred to inflammation; and that its fatal progress was never arrested by cauterizing the morbid structures through the speculum, nor by any other method of treatment.—*Dub. Med. Press.*

On Sudden Death after Delivery. By Dr. A. FORGET (*L'Union Médicale*).—Dr. Forget observes that sudden deaths after delivery ought to be arranged in two categories: 1. Those which occur some minutes or hours after delivery; 2 Those which occur after some days or even weeks, under circumstances which would not lead one to expect the fatal event.

Of the latter kind there are three cases related by M. Robert at the meeting of the *Société de Chirurgie* on January 7th, 1852. In one of these, the woman died on the ninth day after delivery; the other two died on the sixteenth day. Dr. Villeneuve, of Dijon, has related the following case in a letter to Dr. Forget.

A young woman, aged 22, primipara, of strong constitution, had a natural delivery after a labor of forty eight hours. She was seized on the sixth day with febrile symptoms, which continued till the fifteenth or sixteenth day; after which, she appeared to be recovering, until the twenty-sixth day, when she was seized during sleep with a convulsion which caused her to start from her pillow, on which she fell back dead. The following fact is worthy of attention. The pulse of this patient, in general regular, would from time to time cease, and would then suddenly become extremely irregular, the heart exhibiting convulsive, tumultuous, disordered action. This state would occur several times in the day, lasting from half a minute to a minute and a half, and disappearing without leaving any trace. On a single occasion, this phenomenon was observed to be coincident with a slight mental impression, produced by some cries of her infant. No organic lesion in the thorax or abdomen could be detected either by percussion or by auscultation.

With regard to the cause of death under such circumstances, M. Danyau observed at the meeting of the Société de Chirurgie above referred to, "that death occurs always in the same manner—rapidly and unexpectedly; and that the lesions as yet appear to have escaped the investigations of pathologists." In two cases which he has recorded, there was a little serum in the pericardium in one; in the other, there was a slight fatty degeneration of the heart. Dr. Forget observes, that neither of these conditions will sufficiently explain the cases.

In deaths occurring a few minutes after labor, there are generally some premonitory symptoms, which reveal the threatened recurrence to the experienced practitioner. Thus M. Depaul has communicated the following case to the Medical Society of Emulation.

A young woman, who had had slight hemorrhage at the sixth month, was favorably delivered at the full period. A certain quantity of blood was lost, but not enough to constitute what might be

called hemorrhage. The patient went on well for about an hour, the uterus appearing to contract properly, and there being no reason for suspecting internal hemorrhage. She was then seized with paroxysms of severe pain in the hypogastrium, each paroxysm being followed by slight convulsions; at the same time the extremities and the whole surface became cold. M. Depaul, who had already seen a case of death under similar circumstances, sent for the usual medical attendant of the patient, and communicated to him his apprehensions; the latter, however, looked on the symptoms as merely nervous, and capable of being overcome by antispasmodics. The paroxysms ceased; prostration soon set in; the pulse rapidly failed, and the patient died.

An analogous case is recorded by M. Sandras.

A young woman was favorably delivered of a living infant. Two hours and a half after delivery, she began to complain of an indescribable feeling of anxiety, with gradual and rapid prostration. No cause for this could be discovered; there was no internal hemorrhage, and the uterus seemed properly contracted. In spite of all remedies, the prostration became extreme, the pulse failed, the surface became cold, and the patient died.

Dr. Forget observes that, in the absence of any direct anatomical investigation of the two preceding cases, the cause of death can be only surmised. He has no doubt that the introduction of air into the uterine veins is the most plausible explanation; and he regards as inconclusive the objections to this theory, founded on the flexuosities of the vessels, and the approximation of their walls by the contraction of the uterus.—*London Med. Jour.*

THERAPEUTICS.

On the Therapeutic Properties of Arnica Montana. By M. Martin Lauzer.—*Contusions, Ecchymosis, Sanguineous Tumors, etc.*—The efficacy of arnica in these affections was first discovered in Germany; and gained for it the name of *Fallkraut*, or *herba lapsorum*. It was formerly applied as a topical remedy; but at present it is more usual to trust to nature, and to employ rather camphorated spirits and saline lotions. It is not unreasonable, however, to give arnica internally after a fall, if the patient has, as often happens, undergone violent concussion amounting to stupor: but when reaction has set in, medicines of another class must be used.

Pulmonary Diseases.—Murray extols the power of arnica in a host of various diseases; and, in the first place, we have pulmonary affections, of which the names have in the present day changed: such as pain in the side with dyspnœa, false pleurisy, humeral cough removing in the summer and autumn; cachectic and œdematous cough; asthma arising from sudden chill, with rheumatism of the chest and back; asthma following delivery, with alteration of the voice and pain in the nape of the neck; peripneumonia. The tonic and stimulant properties of the arnica would evidently be far from always serviceable in these diseases, some of which correspond to pneumonia and pleurisy,

others to catarrhs, or to convulsive coughs. But, according to Dr. Roques, the nauseating properties of arnica have several times triumphed over obstinate catarrhs. In these cases, the arnica should be combined with pectoral medicines, and its use must be persevered in for some time. Arnica is no less useful, according to the same author, in cases of pneumonia of an ataxic character. In these cases, the arnica is given with extract of cinchona; this combination excites the powers of the system, reanimates the action of the lungs, and favors expectoration.

M. Martin Lauzer remarks that M. Guitrac gives large doses of tartar emetic in chronic catarrh; and Professor Broussonet and Cruveilhier give large doses of ipecacuanha in the same affection and in the pneumonia of old persons; and suggests that arnica might produce similar effects, in such cases, to those of ipecacuanha.

Arnica has been recommended by various authors in inflammation of the liver with petechiæ, suppression of the menses or lochia, uterine hæmorrhage, congestion of the spleen, nodosities of the breast, general atony, hectic fever, atrophy, calculous nephritis, and contractions of organs.

Paralytic Affections.—The writers of the last century have chiefly pointed out the effects of arnica in cases of paralysis. Juncker states, that he cured more paralyzed and contracted limbs with arnica alone, than with combinations of remedies. Collin states, that he cured tremblings, convulsions, palsies, and other nervous affections. Under the influence of this remedy, the patients had pain in the eyes, creeping and tickling sensations in the limbs, and a sense of heat; and these phenomena almost always were prognostic of benefit. These effects are precisely those produced by strychnine; hence arnica would be a succedaneum for this formidable agent; and why should it not be employed before having recourse to the preparations of nux vomica? Collin says that, in cerebral affections, arnica is contraindicated until the fever has ceased, or has diminished; and then nitre must be added to it. Kornbeck extols the action of arnica in mercurial paralysis: it would evidently be only useful in asthenic palsies, in whatever situation. Dr. Roger relates the case of a woman who, after fever, had a sense of weight and loss of power in the lower limbs. Under the use of powder of arnica flowers, she experienced creeping sensations and pain, followed by complete restoration of motion and sensation. According to Collin, Murray, and Conradi, arnica has also cured cases of asthenic amaurosis: but M. Martin Lauzer believes, with Schumucker, that it always fails in cases of amaurosis which have slowly gained their highest degree of intensity.

Spasms and convulsions: convulsive cough.—Arnica, according to Murray, has cured tremblings of the limbs or tongue, opisthotonos, convulsive movements of the head, and twitchings of the limbs. If these affections are nervous, of asthenic origin, and consequently calling for the employment of tonics and stimulants, arnica may be of use.

Intermittent Fever.—Collin, Stoll, Aaskow, Deiman, and Voltelen,

praise arnica as a remedy in ague. Stoll was very successful in the treatment of a quartan, which resisted cinchona. He made an electuary with flowers of arnica and syrup of orange peel; and gave a piece as large as a nutmeg four times a day. This dose caused severe pain in the stomach, and cold clammy sweats, with a large, full, and very slow pulse; but opium calmed these symptoms, which, however, were the forerunners of a rapid cure of the fever.

Typhoid Fever.—It was in the treatment of this disease that arnica enjoyed its best days; but here its fame also suffered dire shipwreck, thanks to its abuse by the Brownians, who almost used it as a specific in continued fevers. Collin said that arnica, by its cardiac power, removes stupor, somnolence, and delirium, in putrid fevers, brings back the eruption of suppressed exanthemata, and resolves metastatic swellings. But Murray judiciously adds that, in order that the desired result may be produced, we must take account of the season and of general conditions;—words full of justice, a reflection on which would have prevented the abuse of using a single remedy in a disease so variable in its form. Stoll, who introduced the use of arnica in putrid fevers, gave it only in those cases in which, the pulse remaining nearly quiet, the patient was feeble, stupefied, prostrate, in a state of somnolence, or of muttering delirium. Arnica is also particularly indicated where the pulse is small, weak, and fluttering, with torpor and prostration of the muscular system. Dr. Roques says that it should be used especially in the enervating diarrhœa, in the obstinate dysenteric flux which, in the third stage of typhus, threatens to entirely destroy the vital powers. Murray recommends it, combined with camphor, when gangrene has supervened on other adynamic symptoms.

In the campaigns of the empire, the good effects of arnica in the army-typhus have been observed and recorded. Dr. Cazin, who used it successfully in the army hospitals during the campaign in Germany in 1809, has since that time frequently employed it in the adynamic stage of typhoid fevers, combining it with the roots of valerian and angelica, which dilute its emetic and cardialgic properties.

Gout.—Barthez has recommended arnica in the treatment of gout. Dr. Roques was of opinion that the best treatment of gout is to torment the patient as little as possible with medicine.

Summary.—Arnica is an energetic excitant, which is far from meriting the oblivion into which it has fallen. Its tonic, excitant, and emetic action, allies it to ipecacuanha; and the nervous symptoms which it secondarily excites, give it some relation to the preparations of nux vomica. Gilibert considered it tonic and aperient in small doses; and in large doses emetic, purgative, diuretic, sodorific, and emmenagogue. When given alone, it is liable to produce more less severe pain in the stomach. This may be prevented or assuaged by combining the arnica with a small dose of opium or some aromatic, such as angelica, canella, or ginger. But if its nauseating effects be desired, it must be given alone.

Doses and Modes of Administration.—The *infusion*, according to

the formulary of the hospitals of Paris, is made by infusing for an hour, a drachm of the flowers in a quart of water, and straining. The *decoction* is made with the same proportions: it is more powerful. The dose of the infusion may be as much as an ounce, sweetened with syrup.

The *powdered flowers* may be given in doses of from ten grains to three or four drachms, in electuary or bolus; this form is preferable in cases of paralysis. The *powdered root* may be given in the same manner.

The dose of the distilled water is from an ounce and a half to three ounces of the alcoholic tincture (one part of the root to eight of alcohol) from fifteen minims to five drachms; of the ethereal tincture (one part of flowers to four of ether) from fifteen minims to two and a half drachms; of the aqueous extract (one part to five of water) from seven grains to a drachm, in a draught or in pills; of the alcoholic extract (one part of flowers to eight of alcohol and one of water), the same quantities.

For external use, the leaves and flowers may be used as a poultice: and the powder may be employed as a sternutatory.

Compound infusion of arnica flowers. (Roques).—Take of arnica flowers, valerian root, each two drachms; infuse them in a closed vessel with half a pint of boiling water; then strain, and add, of peppermint water two ounces, simple syrup one ounce, ether a drachm, tincture of opium from fifteen to twenty drops; to be given by spoonfuls in the adynamic period of typhoid fevers.

Compound preparations of arnica.—The above-named preparations are advantageously combined with wine, cinchona, camphor, and valerian.

Compound powder of arnica root. (Roques).—Take of arnica root in powder fifteen grains; camphor three grains; to be given every three hours in dysenteric typhus, to combat the prostration of the vital powers.

Stimulant bolus.—Take of camphor, arnica flowers, and treacle, each fifteen grains; divide into twelve boli, and give one every hour.

Stimulant electuary.—Take of powdered arnica root an ounce and a half, crude opium three-quarters of a grain, syrup a sufficient quantity. Divide it into six doses; one to be given every two hours in cases of purulent absorption.

Aromatic tincture of arnica.—Take of arnica flowers an ounce and a half; cloves, canella, and ginger, each two and a half drachms; anise, three ounces; alcohol, a quarter; macerate for eight days, and strain. A spoonful in water two or three times a day in contusions. —*Lond. Journ. Med.*

OBITUARY.

Death of John Dalrymple, Esq.—On the 2d of May last, at his residence in London, of phthisis; aged 48. He was surgeon to the London Ophthalmic Hospital. In 1834 he published his work on the *Anatomy of the Human Eye*, which, it is said, was "the first complete and comprehensive work on that subject in the English language." The work, however, upon which his fame as an author will rest imperishable to all time, is his great work on "*The Pathology of the Human Eye.*" "It is singular that neither the originator nor completer of this publication should have witnessed its final success. The late John Scott had brought together a valuable collection of sketches, with the intention of publishing a work on the pathology of the eye. His failing health prevented this; and at his death he bequeathed to his friend and colleague, John Dalrymple, his collection of drawings, knowing his ability to execute this favorite project. Mr. Dalrymple died after the completion of the plates and MSS., and while the text was yet passing through the press. "Had it pleased the Supreme Being to spare Mr. Dalrymple's life a few short months longer, the chorus of praise which now greets the completion of this great work would have fallen gratefully on his ear. But it was otherwise ordained; and the gladness of this event has been darkened by the shadows of the author's tomb."

Death of Prof. William Thompson, M.D.—On the 12th of May last, at Edinburgh, suddenly of disease of the heart; aged 49. He was Professor of Medicine in the University of Glasgow. Dr. F. was a man of extensive learning and varied accomplishments. His principal works are, *A Treatise on Diseases of the Liver; a Memoir on Coal Mines' Phthisis;* and a *Biographical Sketch of his Father.*

Death of John P. Vincent, Esq., F. R. C. S., formerly Surgeon to St. Bartholomew's Hospital, at his residence, Woodland's Manor, near Wrotham, Kent, suddenly, on the 17th July last; aged 74. Mr. Vincent published, in 1847, his "*Observations on some parts of Surgical Practice; to which is prefixed an Inquiry into the Claims that Surgery may be supposed to have for being classed as a Science.*" This (says the *London Journal of Medicine*) we believe was his only literary production; and is one from which we have derived much valuable instruction. It is the work of a practical surgeon, unwilling to obtrude himself on the notice of the profession, until his experience had given authority and weight to his words.

Death of Prof. Recamier—Suddenly, of pulmonary apoplexy, lately at Paris; aged 77. To him is due much of our knowledge of improvements in the surgery and therapeutics of uterine diseases. His treatise, entitled *Recherches sur le Traitment du Cancer*, &c., has done much to extend his reputation and perpetuate his fame.

PART FOURTH.

COMMUNICATIONS
AND
AMERICAN MEDICAL RETROSPECT.

COMMUNICATION.

Case of a Child injured by Lightning. Remarks on "Coup de Soliel."

MR. EDITOR:—On Thursday, July 10, 1851, at about 3 o'clock P. M., I was summoned in great haste to see a child (a little girl), of Mrs. W——, about four years of age, residing at No. 115 Franklin-st., who, it was said, had been struck by lightning. I at once obeyed the summons, and found the child presenting the following symptoms: Total insensibility; respiration as in a quiet, deep sleep; the entire surface was cold, and of a livid hue; the hands were firmly clenched; the temporal and masseter muscles so rigid, that the jaws could not be separated; a spasmodic and tremulous motion of the right arm and leg; the action of the heart, and carotid arteries, were very feeble and intermittent; and the pulsation at the wrist had entirely ceased.

Treatment.—I placed the child in bed, and applied cold water, freely, to the head, neck, arms, and chest; hot mustard foot-bath; cataplasma sinapis over the precordia and abdomen, and upon the legs and ankles; together with frictions. As soon as the jaws could be opened (which was about half an hour), and she could swallow, I administered stimulants, as brandy, ether, ammonia, &c. It was six or eight hours before the system was restored to its natural temperature. Consciousness returned in about twelve hours; but it was twenty-four hours before she could speak, and six or seven days

before she could articulate distinctly. Perfect restoration was the result.

On the afternoon above mentioned, a violent thunder storm passed over the city, and the lightning struck a tree in St. John's Park, which is about three blocks distant from the house. From the mother of the child I learned the following facts:—she was sewing, and sitting near the window, the lower sash of which was raised; and the child and her little brother, two years of age, were playing near her, and standing up. At the moment of the flash, the child fell insensible upon the floor. Her little brother was not affected. Mrs. W——— felt the shock severely, but was not prostrated by it. Besides these three persons already named, there was a young lady in the room, but she was not harmed.

Pathology.—In this case, there was a partial paralysis of the organs of organic life; and a complete paralysis of the organs of animal life, excepting those of the hands and jaws, and even these were partially so. The result in this case has convinced me that, not only was I right in the course of treatment, but, probably, correct in my view of the pathological state of the system, upon which my plan of treatment was based.

In connection with the subject of paralysis, let me say a word in relation to the pathology and treatment of that very fatal disease, "coup de soliel," or sun-stroke. It consists, I believe, in paralysis, more or less complete, of the pneumogastric nerve; believing this to be the case, the treatment must be such as will produce an action in the organs so paralyzed, and this result, I think, will best be secured by the administration of stimulants, as brandy, ether, ammonia, &c., internally; and friction, and counter-irritation, as with cataplasma sinapis, &c., as in the case above named. Within the five years last past, I treated thirty-five cases, upon the above-named plan, a number of which were pulseless at the wrist, when I first saw them; and I have not, as yet, lost my first patient in this disease.

The results, under any course of treatment, could not have been more satisfactory. I believe it will not be disputed, that a large proportion of those who are bled, in this disease, die, and I look upon bleeding, almost, as it were, signing the "*Death Warrant*" of the patient. In a word, avoid blood-letting, and resort to stimulants internally, and friction and counter-irritants to the abdomen and lower extremities; and cold water freely applied to the head and thorax.

I feel confident that the most gratifying results may be expected from the above-named course of treatment.

J. Sage Kilbourne, M. D.

PATHOLOGY AND PRACTICAL MEDICINE.

Two Cases of Sudden Death during Anæsthesia—Dr. Folts' Case.—Henry Keyser, a German by birth, aged 17, was brought to my office, Aug. 6th, about noon, for surgical aid. The middle finger of his left hand had been caught in the gearing of the machine at which he was at work; the last phalanx was carried away and the soft parts badly lacerated and torn. It was thought best to remove a portion of the next phalanx, so that when the mangled muscles, ligaments, &c., should be removed, the extremity of the bone might still be covered. The young man looked pale, and appeared to suffer great pain; but beyond this I observed nothing unusual in his appearance—and saw no reason why ether might not safely be administered, and the further infliction of pain obviated. I made the proposition, and he at once began to inhale a mixture of chloric ether and chloroform. There was about ten per cent. of chloroform contained in the mixture. The inhalation was continued for about four or five minutes, with now and then an interruption by his pushing the sponge away with his hand. Appearing insensible, the operation was commenced, but the first stroke of the knife made him start with a loud expression of pain. He began to vomit, and now sensibility was in a great measure restored. The sponge, replenished, was again applied, and he complained of its making his lips smart. I at once removed it and applied ol. oliv. The sponge was again applied over the nose and mouth, and inhalation carried on as before, and for about the same length of time as at the first attempt, or it may have been a minute or two longer. He again appeared unconscious; and to prevent his waking up as before, I gave the sponge—now containing very little ether—into the hands of Mr. Merrill, directing him to hold it still over the face; but there was again retching and an attempt to vomit, from which cause he but illy succeeded in retaining the sponge as directed. I again commenced the operation, Mr. Venner, who came with the young man, holding the hand.

Up to this time, there was observed nothing remarkable either in his general appearance, the pulse, or the respiration. I had made only two incisions, and was attempting to tie the outside digital artery, which was bleeding, per saltem, showing that up to this moment the circulation was good, when my attention was directed by Mr. Merrill to the appearance of the patient. I saw at once that he was either dead or dying, and directed my assistants to help me lay him at once on his back. I sent one of them for medical counsel, whilst the other assisted me in applying restoratives. I found the pulse at the wrist gone, the action of the heart very feeble indeed, and respiration in a moment ceased. But by the application of strong ammonia to the nose, dashing ice water over the head, &c., he again began to gasp, and was breathing convulsively when Dr. Parcher arrived. But a few heaving inspirations, at long intervals—the action of the heart meanwhile growing more and more feeble—and all was quiet. My patient was dead. Dr. Parcher assisted me in the diligent application of the usual means for resuscitation in cases of suspended animation—but all to no purpose, the vital spark had fled.

I regret that I am unable to give the post-mortem appearances of the internal vital organs, the friends objecting to an autopsy being made. And yet I very much doubt whether the knife would have revealed any thing new. Such, then, are the facts in this unfortunate case. I had read of deaths from chloroform, but had hoped never to have seen one. A coroner's inquest was held at my request over the body of the deceased, a few hours after death, and the jury returned a verdict in accordance with the facts above stated.

But the question will arise in the minds of all who may read this article, how was death caused in this particular case? Was it owing to an impure article used? Was it unskilfully administered? Or was there something peculiar in the organization of the patient, or the state of the nervous system, at the time, rendering this agent toxical with whatever precaution used? That the last position is the true one, is my honest conviction.

On the first question, I have only to remark, that both the chloric ether and chloroform were obtained at W. B. Little's apothecary store, on Hanover-street, where I have usually supplied myself for several years past. And in addition I can state this important fact, that from the same bottle I had administered the ether in a number of cases previously with the usual effect. And, furthermore, the mixture in the phial, containing the small per cent. of chloroform mentioned, had been tested only a few days before, in a case where a similar operation on a finger was required. This patient inhaled from two to three times the quantity that Keyser did, with the happiest effect, and walked home after the operation.

Secondly, I would remark that I have habitually used anæsthetic agents in my practice since their first introduction in this city, and never before witnessed any alarming or injurious effect from their use. At first I employed sulphuric ether; then, for nearly two years, chloroform exclusively. But finding that, according to the experience of others, ether seemed more safe, I have for almost two years relied upon this agent in obstetric and surgical practice, using chloroform only in cases where the ether appeared not to induce anæsthesia very readily. My plan of administering these agents has been uniform. I have never used an inhaler of any kind whatever. The sponge is the only article I have ever used, unless it was the handkerchief or napkin in a few instances when no sponge was at hand. I have always made it a point to admit an abundant supply of atmospheric air into the lungs, and when the patient complained of suffocation, permitted him to push the sponge away for a few moments, and then go on with the inhalation. The sponge I used the other day is of small size, not holding above two fluid ounces, and was seldom filled beyond half its capacity. It is the same sponge that I have used for more than five years, and is so open that, of itself, it is no obstacle whatever to respiration when placed over the mouth and nose.

In regard to the quantity used in the present instance—the phial had on it an apothecary's label; and, before moistening the sponge, the fluid did not reach the lower edge of said label. This fact was remark-

ed by Mr. Venner as well as myself, and there still remains in the phial nearly one ounce of the fluid. In the opinion of the physicians—Drs. Parcher and Thorndyke, who were on the inquest—the quantity used was about two ounces or a little over. By weight it may have been more.

Finally, I learned from the mother of the young man, that he had never been sick, but had been a child of penury and want, suffering at times for the necessaries of life; also that he had met with an accident some years since, on account of which he lay in a fainting condition for some time. One of the men who came to my office with him, but who passed out as I came in, told me, the day after, that he "had no doubt but that Henry died from the effects of fear;" that he trembled like an aspen leaf when he was coming from the shop. We all know what a terrible influence *fear* has over the vital economy. Why, a friend of mine mentioned, in connection with this case, that he once knew an artisan, who died in this way without taking ether. His knife slipped in his hand, and he *thought* he had inflicted a serious wound on his thigh. He swooned away, and all efforts to revive him were unavailing. The surgeon found only a slight scratch of the skin—but his patient was dead!

My conclusion, then, is, that the fatal consequence attending etherization in the present instance is not owing to any inferiority in the article used, to want of care in its administration, nor to any organic disease in the patient; but that we must look for it in the naturally delicate organization of the subject, rendering him very sensitive to external impressions, in the shock that the nervous system had sustained in the injury, and last, but not least, in the influence of *fear*. Not in any one of these singly, but in the three combined.—*Boston Med. & Surg. Jour.*

Dr. Haynes' Case.—*May* 19, 1852—I was called to the neighboring town of Hookset, N. H., to remove a tumor from the thigh of a girl aged 12, the daughter of Mrs. B. On my arrival I found the patient somewhat excited, as most children are at that age when the knife is to be used or even any small operation is to be performed. After waiting about thirty or forty minutes for the attendance of the family physician, who I afterwards learned with regret was absent from town, with the aid of a student, who is a good assistant, I proceeded to administer the ether on a sponge. The patient was placed on the side of the bed, sitting in an upright position, supported by proper assistants; and while one hand was on her wrist, with the other I gradually applied the sponge to the nose and mouth, withdrawing it from time to time as I deemed proper. After continuing in this manner for about ten minutes, amid the struggles of the patient, and perceiving but slight anæsthetic effects, I withdrew the sponge entirely, and after a short interval had elapsed, commenced the application again. In about ten minutes more the patient began to be affected, and soon dropped her head upon the shoulder, when she was placed in a convenient position for the operation; but the moment I took hold of the limb, she was again sitting upright. Again

I administered the ether as previously, and until the head dropped as before. The first stroke of the knife, however, roused the patient so much that it became necessary to restrain her, and at the same time I directed the sponge to be applied until she should cease to strive. In about three minutes the struggles ceased, the sponge was withdrawn, and in five minutes more the tumor was removed. At this time the pulse and respiration, which had hitherto remained good, told me that all was not right. Immediately we commenced giving stimulants, applying ammonia to the nose, dashing water on the face and chest, rubbing and elevating the extremities, exciting artificial respiration, and using all the means recommended in such cases, but without avail. The respiration became more feeble, the pulsations of the heart hardly perceptible, and continuing in this state fifteen or twenty minutes, she died.

I have been in the habit of administering the chloroform and chloric ether, ever since the discovery of these anæsthetic agents, in all operations of any magnitude, and have never seen the least injurious effects result before the present instance. Why this case should terminate thus, having used all necessary precautions, I am unable to divine. On my way to the patient I procured of a respectable apothecary ℥ ij. of concentrated chloric ether, ℥ ss. of which remained after the operation. The girl was below the medium size, in her usual but impaired health, of scrofulous diathesis, and had had an attack of paralysis some two years since, which left one arm nearly useless. I stated to the friends the danger, cited cases of fatal occurrence in the administration of this potent agent, and left them to decide, at the same time giving my influence in favor of its use. I have since used and shall continue to use this valuable agent, notwithstanding I have met with this unfortunate case.—*Ibid.*

On Painful Tubercle, with a Report of two Cases, with dissection, which tend to show that the affection is not Neuroma or enlargement of the Nervous Tissue. By Prof. F. H. Hamilton.—I do not remember to have met with more than the two following cases of "painful tubercle," and as the tumor is exceedingly rare, and its pathology does not seem to have been generally understood, I shall claim for its consideration some space.

Case 1.—I. L. D., aged 26; from Fayette, Seneca county; in good health. Nine months since, he first discovered a small hard tumor on the back of the left shoulder, immediately under the skin. It was then, and has been ever since, extremely sensitive. Four months since, it was accidentally hit, and the pain was intense. It will not bear even the chafing of his clothes without pain. It never has been inflamed. It is now about the size of a large pea; hard, irregular, of a brownish color, and movable.

I removed it by excision, cutting away the cellular texture freely about it. I could not discover any nerve or other vessel communicating with it, or passing through it. Its texture was firm and fibrous.

Case 2.—Hannah Duchett, aged 25 years; healthy. About five years since, she began first to feel a "deep" pain, at a single point, on the fibular side of the calf of the right leg. The pain was then, and has always been since, paroxysmal, occurring at first at intervals of a month or so. The sensation was like electricity, shooting from the point, as a focus, in several directions up and down the leg, but not extending usually farther than four or five inches. Such was the pain, so peculiarly diagnostic of the "painful tubercle."

All this preceded the existence of any tumor, or of any mark by which the spot could be designated; and it was not until a year ago that she first began to perceive a very small, hard tumor, at the point of suffering.

The tumor has now attained the size of a large pea; the skin is slightly elevated, but not discolored. Upon the centre of the summit of the tumor is a small black spot, of the size of the point of a pin, which looks like the obstructed lacuna of one of the cutaneous follicles. The tumor is hard, and slightly movable. It is exquisitely sensitive; the gentlest brush producing a severe pain. The pains are still paroxysmal, but recur almost daily and often many times during a single day.

May 3, 1852.—I excised the tumor with a considerable amount of cellular texture around it.

Examination of the Product.—The tumor lay imbedded upon the under surface of the skin, in which it had formed a cup-like depression, but to which it had no attachments except a very loose cellular. The skin over it, was reduced to less than half its usual thickness. The most careful dissection, aided by a glass, on all sides of the tumor, did not disclose the smallest filament of a nerve, or any thing except the same loose cellular texture.

It was covered with three investments, formed, as I have usually found them in non-malignant tumors occurring in cellular textures, only that the number is sometimes greater, viz., *first*, a tunic formed of condensed cellular texture, the result of the gradual encroachment of the tumor upon this texture; *second*, its immediate and proper investment, which was more dense and pearly; *third*, loose flocculi, or delicate cellular structure uniting the two.

The tumor was firm and elastic. When cut it looked to the naked eye semi-cartilaginous, or firm gelatiniform. With the eye-glass small white spots were visible, but no fibres. Its color was very white.

Dupuytren, in his oral lectures, first demonstrated that such tumors were not neuromata. The symptoms and pathology are explained by him in a manner so graphic that we need, I think, never be in doubt; yet it will be seen, that very few have observed his distinctions; and it is for this reason that I have thought it proper to give these cases so much in detail, as additional confirmations of the correctness of his opinions.—*Buffalo Med. Journal.*

Remarkable Case of Precocity—Menstruation established at four years of age. By CHAS. R. KEMPER, M. D.—A servant girl, owned at this time by Mr. C. M. W., of Woodville, Rappahannock Co., Va., is the subject of a precocious development of the female reproductive organs and appearance of the menses. The development of the general system in this girl, from a year old, was noticed to progress rapidly, till she attained her third year, when an increased size of the mammary glands was first observed, and, shortly after, there appeared the usual growth of hair on the pubes. When she was four years and one month old, her catamenia made their first appearance, and have continued regularly to return up to this date. She is now just entering her thirteenth year.

The development of the brain seems not to have kept pace with the physical growth, but she is possessed of a degree of intelligence usual for her age. She is much larger than an older sister, and has the appearance, from the breadth of the chest and pelvis, to be a fully developed *woman.—Stethoscope & Va. Med. Gaz.*

On the Diseases and Climate of California. By JAMES BLAKE, M. D., F. R. S.—During the months of October and November, 1850, the principal diseases were dysentery and diarrhœa: 85 per cent. of the cases I attended, during these months, were of that nature. The dysentery was of a very untractable character, wearing the patient down by frequent bloody discharges, and even when checked being constantly reproduced. It was very fatal; in the absence of any positive data, I believe about 30 per cent. of those attacked died. The great mortality was not so much owing to the virulence of the disease itself as to the peculiarly unfavorable circumstances in which those attacked by it were placed. By far the larger part of the sick, probably 90 per cent., consisted of emigrants who had just crossed the plains, having accomplished a journey which, at all times fatiguing, was in the year 1850 attended with the most trying circumstances. By far the greater number of emigrants who arrived here in autumn had not only been broken down by fatigue, but had been forced to subsist on a short allowance of food, and that frequently of a bad quality. Under these circumstances, it is not surprising that the first opportunity that was afforded them for satisfying their appetite should have been made an occasion for overloading the stomach, and thus producing diarrhœa. The sudden change from the dry, bracing atmosphere of the interior of the continent and the mountains, to the comparatively heavy, warm air of the valley, exerted a most depressing effect on the system. On this point I can myself testify; for, although without any apparent sickness, yet for the first three weeks after my arrival in the country, from crossing the plains, I was so prostrated that I could lie on my bed during the whole day, without the slightest energy, either physical or mental, and many of my friends were affected in the same way. Disease, I believe, is often brought on by men attempting to work while in this state of prostration. The diet also, was a fruitful source of disease, not only as regards its quantity, but even its quality. The only

fresh meat to be had was beef, and this was generally fried, or rather boiled in rancid lard; the flour was to a great extent damaged, and the butter and salt meat were all more or less rancid. I state these facts to show that, although diarrhœa and dysentery prevailed here to so great an extent, and so fatally, during the fall of 1850, the causes of its ravages are to be looked for principally in the unfavorable circumstances in which the population was placed, rather than to any malarious influence. But not only were these circumstances fruitful sources of disease, but they presented an almost insurmountable obstacle to recovery, even when the more violent symptoms had been subdued. There was no such thing known here as that valuable hygienic remedy called nursing. From the toast water of the sick room your patient had to go back to the beef, salmon, and rancid grease of the boarding-house. There were none of those light and valuable edibles which gradually lead the invalid by a safe path back to his ordinary diet. Relapse after relapse occurred, and it wanted but little assistance from the diarrhœic influence which generally precedes the appearance of cholera, to produce a state of gastro-enteric disease among four-fifths of the newly arrived population.

In this state of the general health, the cholera made its appearance about the beginning of November, and never did it fall on a population so prepared to yield to its ravages. Although it is impossible to obtain any accurate data as to the number of its victims, yet I am confident that, during the few days at which it was at its height, not less than one per cent of the population was daily carried off by it. There was nothing peculiar in the disease as it occurred in this country; its apparent virulence can be accounted for by the previous state of those attacked. The tables appended, showing the returns from the State Hospital in this city, prove that, even during the summer and autumn months, there is very little tendency to gastro-enteric disease, at least when the exciting causes above alluded to are absent.

The diseases more particularly characteristic of the winter months are typhus fever, rheumatism, erysipelas, and pneumonia. The cases of typhus that came under my care were of a mild form, although generally lasting from fourteen to twenty-one days. In none of the cases which I treated did any unfavorable symptoms present themselves. The treatment was purely expectant, with the exception of quinine or bark, and stimulants towards the latter period of the disease. In two instances the red-colored spots were noticed on the sxith day of the disease. From the returns of the State Hospital, it would appear that this disease was prevalent during the autumnal months of last year, and the mortality was 39 7 per cent., a decidedly large mortality. Only three cases were admitted from the city, the others being brought in from the country.

The cases of pneumonia showed themselves soon after the first rains, and could generally be traced to exposure, to wet and cold: they were very amenable to treatment. But three cases came under my care, and in every case the patient made a rapid recovery, the time of treatment averaging nine days.

Rheumatism was one of the most common diseases during the winter months of '50 and '51, attacking principally those who had been previously affected by diarrhœa and dysentery; and in these it generally presented itself with very troublesome, and in fact alarming symptoms. The disease was generally of a low type, and in every case that came under my care was accompanied by inflammation in the muscles, or at least in the aponeuroses; this inflammation was the principal and most distressing symptom. In two of these cases suppuration took place; in one subject, in the calf of the leg, under the gluteus maximus and under the trapezius; and, in the other, in the calf of the leg. In three other cases that I treated, these swellings were present in the calf of the leg, and although I was led strongly to suspect that pus had formed, yet they recovered without any abscess being opened. Pericarditis existed in three cases, but, notwithstanding the unfavorable character of the general disease, this complication did not present itself in a severe form. One of the cases terminated fatally, that in which matter had formed so extensively. I believe the case would have been saved had it remained under my care; I was, however, superseded by an herb doctor, whose first care was to bind up the abscess as tightly as possible to prevent the discharge from weakening the patient. The treatment adopted the administration of colchicum and quinine, and sometimes sulphate of iron; recovery was slow; the average time of treatment being forty-one days. I had an opportunity of seeing some other cases in which the same symptoms showed themselves. Rheumatic affections are not so common amongst the mining population as we might be led to expect, from the exposure to which they are subject, working, as too many of them do, for hours at a time in the water, and also frequently exposed to rain. But very few cases of this disease have been admitted into the hospital during the past year, and this is probably owing to the absence of diarrhœa and dysentery, which seem to exert a peculiar influence in predisposing the system to rheumatism.

Erysipelas is a disease which has been extremely fatal in the country during the last twelve months; but it has existed to a greater extent in the mountains than in the valley. During the course of last winter, five cases came under my care; in all of these, the head was the only part involved, with the exception of one in which the inflammation spread to the shoulder and chest; three of these cases occurred in the same house, and the first case that showed itself was in a man who had been living in another house in the country, where there was a case of the disease. The most striking peculiarities of these cases were the inflammation of the mucous membranes communicating with the natural openings, and the absence of that amount of general and cerebral disturbance which so often renders erysipelas of the head a formidable disease. In every case, the mucous membrane of the mouth and fauces was inflamed; in four cases there were ulceration and discharge of fetid pus from the nostrils; in three cases, the palpebral conjunctiva was severely affected; and, in four of

the cases there was a discharge of pus from the ears. And yet, notwithstanding these symptoms, the cases in which they presented themselves were attended with as little cerebral and general disturbance as any I have ever seen, in which the head was involved. The fever never rose high, nor was depletion required in any case. A dose of blue pill and castor oil, and then quinine, combined with small doses of blue pill and rhubarb, was the treatment usually adopted. The only case that terminated fatally was a man of intemperate habits, who died from a complication of the disease with pneumonia. The average duration of the treatment was nine days. This disease is of frequent occurrence in the mountains, and I have seen many cases of it during the summer. The localities where it mostly prevails are the deep valleys in the mountain districts, which are shut in on all sides by high hills, where the extremes of temperature are great, and the air has a tendency to become stagnant. In some of these places it has proved extremely fatal, the mortality being more than fifty per cent. This large mortality is to be accounted for partly by the intemperate habits of many of the subjects attacked by it, but also in a great measure, I believe, from the too general use of calomel, and from not giving quinine and tonics at an early period. In two of the cases that came under my care, granular conjunctivitis remained as a sequela of the disease, and I have seen some very severe cases of this affection that have been produced by it.

Diseases of the air passages are extremely rare. A mild form of catarrh showed itself apparently in an epidemic in February, 1851, and the same affection is occasionally met with during the winter months; but I have not yet seen a case of acute bronchitis, and the experience of many of my medical friends in the city is to the same effect. This is probably owing to the absence of cold dry winds during the winter months. Very few cases of phthisis are met with, considering the circumstances in which so large a portion of the population is placed, and which in other climates could not fail to develope the latent germs of this disease which exist in so many individuals. Speaking from my own limited experience, it is more amenable to treatment here than in any other country in which I have practised. Two cases of the disease in an early stage have come under my care, occurring in individuals who had a strong constitutional tendency to it; in each case, hæmoptysis to some extent had occurred, and that partial solidification of the lung, indicated by the prolonged rough expiratory murmur, evidently existed. One of these cases has apparently quite recovered, the individual having enjoyed good health for some months. The other case is improving, having gained six pounds in weight during the last month; cod-liver oil, with quinine and iodide of iron, has been the remedy used. It is an interesting fact that in neither of these cases was any marked symptom of bronchial irritation present, and I believe the exciting cause of the disease had, in each case, been improper diet, or living too long on salt meat, which probably was rancid. A better diet was ordered, and strictly adhered to; and it is the advantages derived

from this, and also from the complete absence of any source of bronchial irritation, that have rendered the disease so amenable to treatment. Many cases prove fatal, as well here as elsewhere; but I believe that the climate of this country presents advantages such as are not to be found in any other part of the civilized world, for the treatment of phthisis in its earlier stages.

The diseases arising from malaria might be expected to be very prevalent in the valley of the Sacramento, containing, as it does, thousands of acres of lands subject to annual overflow, and from which there is no escape for the water except by the slow process of evaporation under the rays of an intensely hot sun; yet, notwithstanding this, cases of intermittent and remittent fever are comparatively rare in this part of the valley. A few mild cases of intermittent fever occurred in the neighborhood of the city last spring, but they appeared to be confined to low localities which were situated in the immediate vicinity of stagnant water. I have heart of but two cases of congestive fever, and both of them on low bottoms near the American River, about three miles from the city. As a general rule, the city is exempt from any of the more violent forms of malarious disease; a few mild cases of intermittent and remittent fevers occur, but they are comparatively rare. The whole number of cases admitted into the hospital in this city, which originated in Sacramento, was twelve during the last summer and autumn. But, although the influence of malaria does not show itself by producing any of the more marked forms of disease by which its presence is usually manifested, yet we have constant indications of its existence, by the character it impresses on almost every form of disease occurring in this locality. It would appear that, when in the usual state of health, there are very few individuals in the community who are susceptible to its influence, but when the resisting powers become weakened by any form of disease, the malarious influence then makes itself felt, modifying to a greater or less extent a very large amount of the cases of other diseases. This influence it is often difficult to detect; it is not manifest by any marked symptoms of intermission or even remission, but can only be suspected from the apparent obstinacy of the disease, and from the effects of treatment. Dysentery, diarrhœa, erysipelas, rheumatism, chronic gastritis, and even pyrosis, cases in which the remedy might appear to be strongly counter-indicated, were benefited by the use of quinine, and, in fact, would not yield without it. This modified existence of malaria, in a locality where the elements from which it is generated surround us on every side, is probably to be accounted for by the dryness of the atmosphere during the hottest months in the year; to the moderate temperature that generally prevails, when the amount of humidity in the atmosphere would favor its propagation or diffusion; to the prevalence of constant breezes during the summer months; and to the coolness of the nights, which conduce to refreshing and invigorating sleep.

As regards the number of cases of bilious remittent reported to have been admitted into the hospital, I believe they were for the

most part cases of the mildest form of remittent fever. I understand from many medical gentlemen who practised here during the summer, that they did not see a single case of bilious remittent, and the short time the patients remained in the hospital (on an average eight days)* would indicate a very mild form of remittent fever. From the most accurate information I could acquire (for no records are kept), the greater number of the cases came in from the upper part of the valley, more particularly above Marysville. Scrofulous diseases are rarely met with, and I believe the climate will be found to offer the most favorable conditions for the prevention and cure of this class of diseases.

Diseases of the skin are rare; eczema is the only one I have met with. Onychia is common among the mining population, and slight wounds on the hands are very apt to prove troublesome; this is probably owing to the nature of the diet, for even when wholesome articles of food can be obtained, they are generally spoiled by boiling them in rancid grease. The quantity of rancid grease and salt meat eaten in this country with apparent impunity offers but a poor confirmation of the views of Liebig, of the injurious effects of partially decomposed substances on the animal economy.

Diseases of the nervous system are not very common, although I believe forming a larger proportion in comparison to the whole amount of disease than in the Atlantic States. A very large number of cases of insanity have occurred, thirty-eight insane patients having been received into the hospital from May to December. This prevalence of insanity is undoubtedly owing to moral more than to physical causes, although the extreme dryness of the atmosphere during the summer undoubtedly renders the nervous system peculiarly excitable. There is one fact with which I have been struck whilst travelling in the mountains during the last summer; viz., the rare occurrence of *coup-de-soleil*. It might be supposed that the miners would be peculiarly liable to this disease, exposed as they are for hours to the burning rays of the sun, and frequently with their feet in ice cold water; yet I have never seen or even heard of an instance of sun-stroke, although the rays of the sun are certainly more powerful here than in most of the Atlantic States.

The climate in the mining regions very much resembles that of the valley, and it is necessary to ascend some distance in the mountains before any marked difference is noted, even in the temperature. I have no correct data on this point, but the state of vegetation would indicate that there cannot be much difference in the temperature. When I left Placerville (about sixty miles south of Sacramento), three weeks since, or in the middle of February, the young shoots of the buckeye were three inches long. The masoneeta (a species of erica) was in full bloom. The humming birds were build-

* In drawing up this average, three cases were excepted in which the patients remained in the hospital thirty-seven, fifty, and sixty-four days, and in which there was undoubtedly some complication.

ing their nests, and I believe vegetation was quite as forward, and, perhaps, more forward than in the valley. This was at an elevation of two or three thousand feet above the valley.

The mining regions are generally extremely healthy, with the exception of those localities which are situated in deep valleys surrounded on every side by high hills. Here the extremes of temperature are very great. As a general thing, the nights in summer are calm, and the great radiation that takes place under a perfectly clear sky rapidly cools the layer of air in direct contact with the ground. This cold air can be felt running down every gully and ravine leading into these deep hollows, and if there is not any large opening by which it can drain off, it accumulates and fills the valley with a body of dense, stagnant air, the temperature of which descends very low before morning. In such places, typhus fever and erysipelas were very prevalent during last summer, and were also very fatal. With this exception, the mountain regions are very healthy; and it is a striking fact, in confirmation of this, that exposure can be borne here to almost any extent with impunity. During ten months in the year, the shelter of a tree is all that is required. When travelling in the mountains, I always slept in the open air except when it rained, and I never experienced the slightest inconvenience from so doing; nor have I ever seen any instance in which bad results followed, except in wet weather. This is very different from what we are taught to believe as regards exposure to the night air in the Atlantic States, with how much reason I cannot pretend to say, never having there tried the experiment. The general health of the community is, I believe, of a higher character than in any other part of the Union; the complexion here generally assumes that ruddy tint which is considered, and I think justly, as the most unequivocal sign of a high state of health in individuals of the Anglo-Saxon race. A residence of a few months in the country is almost always accompanied by a marked increase in weight, and there can be no doubt but that the climate is conducive to fertility in the female. Although I may expose myself to the charge of enthusiasm as regards the climate of this country, yet I am but expressing my candid opinion when I state that I believe California will be found more conducive to the highest physical and intellectual development of the Anglo-Saxon race, than any other part of the globe. There is not a day in the year in which the powers of the mind or the body are enervated by heat or numbed by cold. And when the agricultural resources of the country shall become developed, and the swamp lands reclaimed and brought under cultivation, I believe that every external influence, detrimental to the preservation of health, will be reduced to a minimum.

Table showing the number of cases of the principal diseases admitted into the State Hospital, Sacramento City, with their average mortality and duration of treatment.

	June.	July.	August.	September.	October.	November.	December.	Total.	Number of deaths. Per cent.	Average time of treatment.	Number of cases in Sacramento.
Intermittent fever .		6	6	11	12	4	6	45	1.2	7 dys	5
Bilious remittent fever	4	6	21	21	38	18	8	116	4.3	8	6
Congestive fever . .		2		2				4	50 0	6	1
Typhus fever . . .			1	4	12	5	11	33	39.7	13	3
Continued fever . .	3	2	2		1	2		10		9	1
Erysipelas			1	4	3	1	2	11	18.1	7	
Diarrhœa	3	1		1	1	3		9			
Chronic diarrhœa . .	4	3	2	3	5	3	1	21			
Dysentery	2	1	1		1	2	6	13	56		
Acute bronchitis . .						3		3	54		
Chronic bronchitis .	1		2		1			4			
Pneumonia							5	5	100		
Pleurisy	1					1		2			
Acute rheumatism .	9	3	2					14			
Chronic rheumatism .	3	2	5	7	4		2	23			

Amer. Journ. Med. Sci.

On the Pathology of Saccharine Diabetes. By CHAS. FRICK, M. D., of Baltimore.—In conclusion, then, to express in a few words the whole of our knowledge of the pathology of this disease, we say that in a state of health sugar is formed in the liver; that this sugar may be secreted when only azotized food is used; that in all probability it is formed from the fat which is also produced in this organ; and that it is then conveyed by the blood, together with any sugar that may have been taken in as food, to the lungs, and there eliminated in the form of carbonic acid and water. That in diabetes, from some cause at present unknown to us, an unusual amount of this substance is formed by the liver, more than the lungs can dispose of, the surplus passing off by the different excretory and secretory organs: and that although an amylaceous or saccharine diet increases the quantity, yet abstinence from these articles of food will not prevent it from making its appearance in the urine and other excretions.

For many of the ideas herein stated we are indebted to M. Bernard, and we cannot but think that science is under great obligations to him for the satisfactory proofs he has given of the functions of the liver, so long a *terra incognita* to pathologists. Indeed, its importance as an organ of *sanguification* as well as *depuration* ought readily to be admitted, when we consider its large size in proportion to the rest of the body, and the complexity of its anatomical structure.—*Ibid.*

SURGERY AND SURGICAL PATHOLOGY.

On the Effects of Anæsthetic Agents in Operations for Gunshot Wounds. By J. B. Porter, M. D., Surgeon U S. Army.—In our former paper, the case of Williamson was presented with some remarks in relation to the use of sulphuric ether for producing anæsthesia in operations in the General Hospital at Vera Cruz, in 1847. In the summer of that year, an amputation of the thigh was performed, the patient having been put under the influence of ether, in which the hemorrhage was almost uncontrollable. The blood spouted in all directions, and I have never seen an operation where it was necessary to secure so many bleeding vessels. Even after every small vessel that could be got at was secured, it was necessary to use cold water freely to suppress the general oozing of blood. At the time, I imputed the obstinate hemorrhage to the pernicious influence of the ether. In gunshot wounds anæsthetic agents are almost universally unnecessary, and are almost universally injurious. It was for this reason that they were entirely given up in the hospital at Vera Cruz.

It may be well questioned whether anæsthetics are not calculated to produce injurious effects in all important amputations; but they certainly do so in operations performed for gunshot wounds. M. Velpau says: "Chloroform evidently depresses the nervous system, and as great prostration always exists in patients who have received gunshot wounds, it is advisable to refrain from any anæsthetic means."—*Ranking's Abstract*, 1848. Mr. Alcock refers to the cases of soldiers wounded in battle, where the excitement is such as to carry them through almost any operation. I regret that Mr Alcock's paper is not before me. These are the cases spoken of by Mr. Guthrie: "Soldiers in general are anxious to undergo an operation when they find it inevitable, and frequently press it before the proper time; that is, before they have sufficiently recovered the shock of the injury."—*Gunshot Wounds*, p. 232. These are the cases which require a little more time, some "encouraging words," and perhaps a little wine or brandy and water; but no anæsthetics, for the patients are already sufficiently depressed.

There are two sets of cases; in one (Velpeau's), the shock to the nervous system is great, from which the patient may not recover, and the use of anæsthetics would be awfully destructive; in the other class, they are unnecessary, and would prove useless and injurious. In the flap operation, they must prove more injurious than in the circular; from the fact that muscle forms almost the entire covering for the stump; and the contractility of the muscular tissue is for a time almost annihilated, to be recovered irregularly at irregular intervals. Further, after the use of these agents wounds do not heal so readily by the first intention.

M. Jobert, on the use of ether, states that the local inflammation has proved less, and that union by the first intention has been prevented. I am able to bear testimony to the correctness of M. Jobert's statement.

I must be permitted to refer to the *Transactions of the American Medical Association* for 1851, pp. 271, 272, 315, 323. In the Massachusetts General Hospital:—

"It does not appear that the fatal results of amputation have at all diminished by the introduction of anæsthetic agents."

New-York Hospital:—

"The general mortality has been for three years and a quarter forty *per centum*. As regards the method of operating, we observe that the amputations of the thigh, in which the fatality was as high as thirteen in seventeen, were all flap operations. Eleven of the leg were removed by the circular, one died; while of four by the flap, two died."

That is, nine *per cent.* in one set of cases, and fifty *per cent.* in the other.

"In almost every case chloroform or ether was employed; but, while it is admitted that anæsthetics may have had some influence in the increased mortality in the New-York Hospital over preceding years, since union by the first intention was now much less frequently observed; still it is to be remembered that hospital gangrene, entirely unknown before, and purulent cachexia and erysipelas, extensively prevailed there during the past three years."

Could the anæsthetics have had an influence in producing the "hospital gangrene, entirely unknown before," and the "purulent cachexia and erysipelas," as well as prevent union by the first intention?

Dr. Lent, Resident Surgeon of the New-York Hospital, says:—

"In almost every case, however, either *chloroform* or *ether* was employed; generally the former until the occurrence of a fatal case from it in this hospital; afterwards the latter, from which we have never had any bad consequences, and which has never failed to prove effectual. * * * Anæsthetics came into general use about the period of the commencement of these statistics. May not the employment of these have had its influence upon the mortality? This is a very important question. We do not deny that it may have had some influence in augmenting the fatality of operations; but we have seen no reason to infer that it has, except perhaps the fact that *union by adhesion* seems to have been much less frequent since the introduction of anæsthetics into this hospital than before. Whether the two are in the relation of cause and effect, it is, we fear, impossible to determine at present."

In an unhealthy atmosphere or climate, the healing of wounds by adhesive union is doubly important for obvious reasons; and I have often regretted that etherization was so much resorted to in capital operations at Vera Cruz during a portion of 1847; nor can I avoid congratulating both the patients and myself that, before the summer had passed away, its employment was wholly abandoned. Anæsthetics poison the blood and depress the nervous system; and, in consequence, hemorrhage is much more apt to occur, and union by adhesion is prevented.—*American Journal of Medical Science.*

Strangulation from Enlarged Tonsils—Laryngotomy. By J. M. WARREN, M. D., (*Boston Soc. Med Imp.*)—"Dr. W. showed the larynx of a man on whom he had performed the operation. The patient was brought into the hospital struggling for breath, and almost pulseless, supposed to be laboring under an attack of laryngitis. The danger of suffocation was so imminent that no time could be spared to inquire into the history of the case. Dr. W. had the patient placed immediately on his back, and proceeded to open the larynx—a matter of some difficulty—owing to the violent efforts of the patient for breath. As soon as the air penetrated freely into the larynx, he began to revive; the pulse became more steady; the respiration regular. Stimulants were exhibited both by the mouth and per anum, but the system had received too severe a shock to recover, and he gradually sank and expired quietly in an hour or two after the operation. On removing the larynx, no marks of inflammation of that organ could be detected. On looking further, however, the cause of death was discovered. The tonsils, greatly enlarged, and in a state of violent inflammation, filled up the posterior fauces. The epiglottis had been gradually encroached upon, so that, finally, it was pressed down, and almost completely prevented the entrance of air into the lungs. The history of the case, as learned afterwards from the father of the boy, was this: He had been employed, four days before, in unloading a ship, the weather being very cold and rainy. The following day he was taken with sore throat, for which some simple remedies had been applied on board the vessel where he slept. He was first seen by a physician on the day he was brought to the Hospital.—*Amer. Jour. Med. Science.*

On the Radical Cure of Reducible Hernia, by Injection. By JOHN WATSON, M. D., Surgeon to N. Y. Hospital.—I do not propose just now to go into the whole merits or demerits of this operation, a task which has been assigned to other hands, and which has already been in some measure achieved, by one of the Committees of the American Medical Association (see their report in the transactions for the session of May last). My only object is to give the details of a single case treated in this way, in connection with such hearsay information as I have been able to collect concerning the operation in other quarters.

The procedure now under consideration, if I am not mistaken, was first brought into notice through an irregular channel, by a certain Industrialist, of New England. But the first notice I remember to have seen of it, was in Professor Pancost's "Operative Surgery." In July, 1848, my attention was for the second time called to this subject, by a gentleman under my care for the treatment of varicocele, who, a year or more previously, had undergone an operation for the cure of a reducible hernia, by what he described as a trifling process, and with complete success. He spoke of it as a simple puncture, which subjected him to very little uneasiness; and assured me that he was cognizant to the cure or relief of other individuals, who had been treated like himself, by a practitioner of Boston. I subsequent-

ly ascertained, that the instrument with which this individual operates, had been prepared by a cutler of this city; but on inquiry I found that it had been patented by the operator, and was, consequently, to be used only by himself. As I had made an inquiry for it, with the view of employing it on a case then in hand, I could not but feel indignant that any practitioner claiming to belong to the regular profession should have thus prostituted his noble calling to mercenary ends; but believing that no special form of patent instrument is essential for the making of a puncture, or for introducing an irritating fluid beneath the integuments through this, I attempted in my own way to get along without it, as in the following case.

Joseph A. Seavell, of Ohio, seaman, aged 31, was admitted into the New York Hospital, Nov. 24th, 1851, with a large inguinal hernia, occupying the left side of the scrotum, which had been then protruding for several hours, and had resisted several well directed efforts for reduction. The patient for the last four years had been occasionally troubled by the protrusion, but had never before been baffled in his efforts to reduce it: and by the use of a truss he had been able to follow his regular occupation. With some little trouble the tumor was reduced by taxis, soon after his admission; and on the 29th of November, having explained my object to the patient and obtained his consent, I attempted to effect a radical cure of the hernia.

While the patient was lying on his back, with his scrotum and left spermatic cord drawn slightly towards the right side, and with the integuments over the left external abdominal ring slightly on the stretch, I introduced the point of a delicate bistoury through the integuments, directly down to the crest of the os pubis, the point of the instrument touching without dividing the lower termination of Poupart's ligament, and made to work freely in the loose tissue immediately in front of the ring, but without wounding the spermatic cord. Having made the puncture and withdrawn the bistoury, the nozzle of a small syringe, charged with tincture of cantharides, was introduced through the wound, and about a dram of this fluid injected into the bottom of the cut, the hand of an assistant, in the meanwhile, resting firmly over the inguinal canal to prevent any portion of the injected fluid from entering this, or passing through the sac into the abdomen.

The whole procedure was the work of a few seconds, and gave the patient little or no uneasiness. I next applied a compress and spica bandage, to keep the parietes of the inguinal canal in close apposition, and administered an anodyne, keeping the patient on his back, with directions to apply an evaporating lotion, should severe inflammatory symptoms supervene

In a few minutes after the operation, he began to speak of pain from the injection. The sore became more troublesome, and extended for several inches in every direction, but was severest along the ascending track of the spermatic cord. He slept but little during the following night; but next morning the pain had subsided, a slight soreness only remaining in the part. The patient was at the same time suffering from chancres. I made the treatment of these

the pretext for keeping him on his back with the compress and bandage applied as above, for several days. He spoke of no uneasiness from the operation after the second day. On the 12th of December, he was walking about without his truss, and with no apparent tendency to a recurrence of the hernial protrusion. On the following day, being desirous to join his vessel which was about to sail for South America, he requested his discharge, promising to write to me, and report the further progress of his case, should the swelling reappear, —and, if possible, to report in person, at the close of his voyage. But. as yet, I have not heard of him.

The operation in this instance had evidently a beneficial effect, and I am not certain, that it may not have effected a permanent cure. I am not disposed to believe that any portion of the injected fluid entered the hernial sac; but by exciting inflammation around this within the column of the external ring. and the subsequent condensation of tissues, which is so apt to follow acute inflammation, we may readily imagine that this procedure may, now and then, effect an object which we have hitherto sought in vain to effect by other and severer measures.—*N Y. Med. Times*

Summary of Twenty-five Cases of Urinary Calculus, in Twenty-three of which the bi-lateral operation was performed. By PAUL F. EVE, M. D, Professor of Surgery in the Nashville University, Tennessee.

Sex.—23 were males, and 2 females.

Race.—2 were black, 2 mulattoes, and 21 white.

Age.—16 were under thirteen years, 7 between twenty and thirty-five, one at sixty-five, and one at seventy-seven.

Operation.—24 were cut, 23 of which by the double lithome.

Result.—4 died after being operated upon, 3 of which from the operation, 2 indirectly (supervention of erysipelas), and only one directly (supervention of erysipelas), and only 1 directly from it. The remaining 21 fully recovered. Of the 19 first operated upon, but one died; and in that instance, death was not owing to lithotomy. 17 were well in two weeks after the bi-lateral operation. In no case have I heard of the reproduction of stone, nor has a fistula occurred in one.

Number of Calculi and their Chemical Constituents.—Single in twenty-two cases, 2 in one case, 3 in another, and 117 in another; total, 144 stones in the twenty-five cases. Composition, chiefly some preparation of lime. There is not the usual proportion of uric acid formation. Of the five specimens obtained in Tennessee, each contained lime; thus confirming Prof. Peters' analysis of the Dudlean collection of calculus at Lexington, Kentucky. It would seem from this collection that phosphate of lime is not as rare a composition of urinary concretions as is generally supposed.

My method of performing lithotomy is now submitted, but claiming for it nothing original.

It will be seen that decided preference is given to the bi-lateral operation of the late distinguished French surgeon, Dupuytren. I

have found that owing to the irregularity of the external surface operated upon, it was difficult to make the crescent-like shape or the semicircular incision through the skin and soft parts. I now make the cut like a χ, with a short tail. The grooved staff previously introduced into the bladder, and the scrotum elevated by an assistant; a short incision is made directly upon the raphe of the perineum at the bulb of the urethra, and the direction changed at a very oblique angle at the end of about three quarters of an inch, to terminate at a point midway between the anus and left tuberosity of the ischium. With the edge of the knife now turned upwards, it is made to penetrate and commence the other leg of the χ at the point of the right side corresponding to the one just terminated upon the left. This incision is deepened as the instrument ascends, and arriving at the middle of the perineum with the edge turned directly upwards, the urethra is opened, and the groove of the staff exposed. This not only simplifies the external incision of lithotomy, but effectually guards against the liability to wound the rectum. The operation is then completed in the usual way.

The suggestions made in the *Southern Medical and Surgical Journal*, in 1849, in regard to the instruments, I expect to have carried out this summer while in Paris; and they may hereafter be presented to the profession.—*Nashville Journ. Med.*

MISCELLANEA.

The Mineral Acids in Cholera. By A. Hester, M D.—We feel it our duty as editor, to call the attention of the profession to the efficacy of the mineral acids in the treatment of Cholera. From time to time, we have noticed certain communications in the London Lancet and other respectable periodicals, in which Sulphuric Acid has been highly extolled as a remedy in Cholera and Diarrhœa. Recently, during the prevalence of this disease in our city, some of our most respectable Physicians have been induced to test this medicine, and according to their testimony, with the most astonishing results. It has proved successful in several cases, marked by complete collapse,—a cold, relaxed and clammy skin—sunken and retracted features—pulseless—with vomiting and colliquative discharges; and indeed all those fearful symptoms which generally characterize the latter stages of this disease. Of course, it is not contended that the medicine will relieve and restore those who have been collapsed for hours; in such cases Providence alone can avail any thing. But in cases just sinking into and even already collapsed, the following formula has arrested the disease and brought about reaction:

℞	Acid Sulphuric,	gutt xii
	Acid Nitric,	" x
	Aqua Distil.	f ʒ iss
	Sach. Alb.	qs.

Fit. Mist.

Dose—Tea spoonful every *ten* minutes. The medicine speedily allays vomiting and checks the purging, and the pulse gradually but steadily rallies, and reaction is in due time established. None of

these cases have come under our personal observation; but we have assurances of the efficacy of this treatment from medical friends in whose intelligence and veracity we place implicit confidence.

We are now testing the remedy, but will not be able to report the result in this number.

We hope our friends will give it a fair trial, should opportunity, unfortunately, offer. The patients take it readily, and it is scarcely less pleasant than a lemonade. Whilst using the medicine internally, the usual revulsives and counter-irritants may be employed externally.—*N. O. Med. & Surg. Jour.*

Efficacy of full doses of Quinine in Comatose pernicious Intermittent fevers.—*Comatose Pernicious Intermittent Fever* is, among French writers, tantamount to our *Malignant Intermittent*, attended or complicated with violent cerebral symptoms. We read with much pleasure and instruction the report of two cases of this form of fever in our industrious cotemporary, *L'Union Medicale de la Louisiane*, drawn up by Dr. Charles Faget of this city. One was the case of a Priest—the other that of a negress. Both, during each returning paroxysm, labored under stupor, or rather coma, with a small, feeble and rapid pulse, cool extremities and tongue. With much tact and *habilité*, Dr. Faget detected the *remittent nature* of the disease, and forthwith decided upon the *only* course of treatment upon which he could rely for success, being well aware that each recurring *access* but diminished his chance of success. With as much boldness as skill, he resorted to full doses of the Sulphate of Quinine, regardless of the comatose symptoms, and had the gratification of rescuing both his patients from death. He gave 35 grains of Quinine to his clerical patient at one dose, and gradually reduced it daily. As the heat returned to the extremities, the pulse rose and became full, and the head symptoms yielded. The negress was treated in a similar manner, with the addition of cold effusions upon the head, and she too gradually rallied.—*N. O. Med. & Surg. Jour.*

Proceedings of the New York State Medical Society at its semi-annual Meeting.—This Society commenced its second semi-annual meeting, at the College of Physicians and Surgeons, Crosby Street, June 29. President, Dr. Alonzo Clark, in the chair. Committees to arrange business and to admit honorary members for the session were appointed.

The President read an address, one of the most important suggestions of which was, the construction of a series of blank forms, embracing various important diseases, to be printed and circulated, in order to obtain statistics on a uniform basis.

Dr. Tuthill read an elaborate and valuable paper upon vital statistics, which was referred for publication.

Prof. C. A. Lee read a paper upon the moving forces of the circulation, giving a *résumé* of the various theories propounded in explanation. Mrs. Willard's opinions received full consideration.

Dr. Swett read a paper on the Pathology of Bright's Disease, in

confirmation of the views on this subject, recently brought forward by Dr. Johnson, of London, that the disease is a fatty degeneration of the kidneys. Dr. Van Arsdale exhibited, under the microscope, a number of specimens, illustrating the appearance presented by this degeneration. The two microscopes used were manufactured by an artist, residing at Brooklyn, of the name of Grunow.

Wednesday, June 30.—Dr. J. R. Wood, of this city, then gave a history of a remarkable case of rupture of the bladder successfully treated, in a boy about ten years of age. The little patient was exhibited, much to the satisfaction of the members. Dr. Wood remarked, that of some eighty similar cases, whose histories had been collected, not more than two or three had recovered.

Dr. Thomas Spencer read a very able paper on the "Atomic Theory of the Growth of Vegetables," accompanied with large colored diagrams, by which he illustrated all the changes that take place in the vegetable organization, which he attributed to the chemico-vital action of six elements, which were prominently displayed by new chemical symbols, viz, two supporters of combustion, chlorine and oxygen; two leading combustibles, carbon and hydrogen; and two combustible metals, sodium and iron. By the instrumentality of iron at the leaf, the carbonic acid for tree growth is made from the food of plants, as the doctor explained; and the strict analogy of *leaf* and *lung* respiration was pointed out in part, although time did not allow his presenting the animal branch of his subject in full, as he had been invited to do, and sustained with uncommon ability. The paper was referred to the Committee on Publication of the State Medical Transactions.

Dr. Parrish, of Philadelphia, then presented copies of the Pennsylvania Medical Transactions, calling attention to one feature of them, the study of epidemics in connection with the geological structure of their different localities, and thanking the Society also, for the honor of being elected an honorary member.

After the action taken thereon, the President passed the Society over into the hands of the Committee of Arrangements, under whose direction they visited the New-York Blind Asylum, the Institution for the Deaf and Dumb, the Reservoir, the High Bridge, &c.; calling, on their return, at the elegant country seat of Dr. Mott, at Bloomingdale, by whom they were entertained in the most hospitable manner.

In the evening, the Society attended a meeting of the New York Pathological Society, at their rooms, in the Crosby Street College, which was also attended by a large number of physicians, many of them from other sections of the State.

Numerous specimens of interest were exhibited, and made the subjects of valuable and practical remarks.

Thursday, July 1.—The Society again met, according to adjournment, at the College. The President, Dr. Clark, made a very interesting communication to the Society on the subject of pneumonia, containing some new views as to the nature of the changes which occur in its different stages; after which the Society adjourned for

the purpose of visiting the various hospitals and establishments, at the invitation, and under the charge of the Governors of the almshouse, on Randall's Ward's, and at Blackwell's Islands, and at Bellevue.

This excursion afforded the members great satisfaction, and impressed them very favorably with the character and management of our public benevolent institutions.

Friday, July 2.—Dr. Corson read an interesting paper on the Functional Diseases of the Heart, their Rational and Physical Signs, and Treatment, which was referred to the Committee on Publication.

Dr. Van Buren then read a paper on the operation of tying the subclavian artery, with statistics of the operation, together with a report of the case, in which he operated successfully, the patient being under the influence of chloroform, and with the result of saving the patient's life. Dr. V. B. stated that he had collected 101 cases in which the operation had been performed; 43 deaths out of the whole.

This was a valuable paper, and was also referred to the Committee of Publication.

Dr. Peet, President of the Institution for the Deaf and Dumb, in this city, read an elaborate paper on the statistics, treatment, causes, &c., of deafness and dumbness, containing many interesting results, of which our limits will not allow us to give even a brief abstract. It was regarded as a very valuable contribution to science, and measures were taken to insure for it a circulation commensurate with its merits.

Dr. Spencer gave an outline of some points connected with the paper which he had read, which were rendered brief by the near approach of the hour for visiting the New-York Hospital, to which institution the Society then adjourned, where they examined, with much interest and satisfaction, the improvements in ventilation and warming recently introduced.

The afternoon was chiefly devoted to an exposition, by Dr. Clark, of the statistics of pulmonary consumption. Thanks were then voted to the managers of the different public institutions for their kind invitations, also to Drs. Mott, Cheesman, and Stevens, and to the College of Physicians and Surgeons, for the ample accommodation furnished; when the Society adjourned.

An invitation was extended to the Society to meet the New-York Academy of Medicine, and to visit the new college edifice of the University of the City of New-York, in Fourteenth Street, which were accepted; but, owing to the many other pressing engagements, could not be met.

EDITORIAL AND PROFESSIONAL CHANGES.

Dr. John Evans has retired from the editorial management of the North-Western Medical and Surgical Journal, and Drs. W. B. Herrick and H. A. Johnson have succeeded him.

Dr. R. E. Rogers of the University of Virginia has been appointed to the Chair of Chemistry in the University of Pennsylvania, rendered vacant by the decease of his brother, Dr. J. B. Rogers.

Dr. Paul F. Eve has become associated with Dr. W. K. Bowling in the editorial management of the Nashville Journal of Medicine and Surgery.

Dr. E. L. Dudley has retired from the editorship of the Transylvania Medical Journal, and Dr. L. J. Frazer succeeds him.

Dr. Samuel G. Armor has retired from the editorial chair of the Western Medico-Chirurgical Journal.

Dr. John Bell has resigned the Chair of Theory and Practice of Medicine in the Medical College of Ohio.

Dr. Eli Ives has resigned the Chair of Theory and Practice in Yale College, and been appointed to that of Materia Medica in the same Institution.

Dr. Worthington Hooker has been appointed the successor of Dr. Ives in the Chair of Theory and Practice in Yale College.

Dr. R. D. Mussey has resigned the Chair of Surgery in the Medical College of Ohio, and Dr. H. W. Baxley has been transferred from the Chair of Anatomy to the same.

Dr. Daniel Drake has resigned the Chair of Theory and Practice in the University of Louisville, and has been appointed to the same Chair in the Medical College of Ohio.

Dr. Thos. D. Mitchell has resigned the Chair of Theory and Practice in the Philadelphia College of Medicine.

Dr. J. P. Judkins has resigned the Professorship of Anatomy in the Starling Medical College, Columbus, Ohio.

Dr. R. H. Paddock has been appointed the successor of Dr. Judkins. He was formerly Professor of the same Chair in the Willoughby Medical College.

Dr. Jedediah Cobb has resigned the Professorship of Anatomy in the University of Louisville, and been appointed to the Chair of Anatomy in Medical College of Ohio.

Dr. Austin Flint has been appointed the successor of Dr. Drake in the University of Louisville.

Dr. B. R. Palmer has resigned the Chair of Anatomy in the University of Buffalo, and been appointed the successor of Dr. J. Cobb in the University of Louisville.

Dr. E. M. Moore has been appointed the successor of Dr. Palmer, in the University of Buffalo.

Dr. F. G. Smith our confrère of the Medical Examiner, has been appointed Professor of the Institutes of Medicine in the Pensylvania Medical College.

Dr. J. M. Allen has been appointed Professor of Anatomy in the Pennsylvania Medical College.

Dr. J. J. Reese has been appointed Professor of Medical Chemistry and Pharmacy in the Pennsylvania Medical College.

Dr. J. C. Hughes has been appointed to the Chair of Anatomy in the Iowa University, rendered vacant by the decease of Dr. Hard.

PHILADELPHIA MEDICAL AND SURGICAL JOURNAL.—This is a new Candidate for Professional favor. It is a monthly journal of sixteen octavo pages. Its editor is understood to be Prof. J. BRYAN, M. D., of Philadelphia. A gentleman of a high order of talent, as our readers are well aware by his contributions to this Journal. We cordially wish him success in his enterprise, and shall with pleasure welcome this journal to our exchange list.

Brooklyn City Hospital.—We congratulate the profession of our sister city on the success which have so far crowned their efforts in relation to this charity. The Trustees of this much needed institution have, considering the difficulties they have had to encounter, acted well their part. And now we understand that the main building with accommodations for about 100 patients is so far completed as to be occupied for hospital purposes. The following is a list of the Medical Staff of the Hospital.

Attending Physicians.	*Attending Surgeons.*
HENRY J. CULLEN, M. D.	DANIEL AYRES, Jr. M. D.
JAMES CRANE, Jr. M. D.	DEWITT C. ENOS, M. D.
J. SULLIVAN THORN, M. D.	JOHN COCHRAN, M. D.
JOHN. N. CORSON, M. D.	JAMES M. MINER, M. D.

The following are the statistics of the Brooklyn City Hospital, from its organization, Dec. 6th, 1846, to January 1st, 1852.

Dates.	Medical cases.	Surgical cases.	Total.	Recovered.	Relieved.	Removed by request.	Eloped and Dismissed.	Died.
1847. . .	87	37	124	93	8	3	1	19
1848. . .	60	30	90	70	3	5	3	13
1849. . .	46	42	88	64	11	4	0	9
1850. . .	52	43	95	63	14	4	2	12
1851. . .	52	78	130	85	13	4	2	25
	297	230	527	375	49	20	8	78

Remaining under treatment, January 1, 1852—16.

OBITUARY.

DEATH OF PROF. J B. ROGERS, M. D.—In Philadelphia, on the 15th of June last, of Bright's disease of the kidney, in the 49th year of his age. Dr. Rogers in 1847 succeeded Dr. Hare as Professor of Chemistry in the University of Pennsylvania. He was a talented and accomplished lecturer; a gentleman and a man of science.

DEATH OF ISAAC PARRISH. M. D.—In Philadelphia, recently of dysentery, aged about 40 years. He was an honored physician, a distinguished writer, and a Christian.

DEATH OF JOHN R. CHAPIN, M. D.—At New Haven, Ct., on the 23d of June, aged 41 years.

TO READERS AND CORRESPONDENTS.

A System of Operative Surgery; based upon the practice of Surgeons in the United States, and comprising a Bibliographical Index and Historical Record of many of their Operations, during a period of two hundred years. By HENRY H. SMITH, M. D., Surgeon to the St. Joseph's Hospital; Assistant Lecturer on Demonstrative Surgery in the University of Pennsylvania, etc., etc. Illustrated by numerous Steel Plates. Philadelphia: Lippincott, Grambo & Co. 1852. 8vo.. pp. 698, with 80 colored plates. (From the Publishers.)

Transactions of the Medical Society of the State of Pennsylvania, at its Annual Session, held in the city of Philadelphia, May, 1852. Vol. II. Published by the Society. Philadelphia, 1852: 8vo. pp. 146. (From the Society.)

Quarterly Summary of the Transactions of the College of Physicians of Philadelphia. From August 4, to October 6, 1852, inclusive. Philadelphia: Lippincott, Grambo & Co. 1852. 8vo., pp. 28. (From the Publishers.)

Superiority of Sanitary Measures over Quarantines. An Address delivered before the Suffolk District Medical Society, at its third Anniversary Meeting, Boston, April 24, 1852. By HENRY G. CLARK, M. D., one of the Surgeons to the Massachusetts General Hospital. Printed by request of the Society. Boston: 1852, 8vo., pp. 40.

Appendix (C.) *to the Report of the General Board of Health on the Epidemic Cholera of* 1848 *and* 1849. Abstract of Report, by JAMES WYNNE, M. D., on Epidemic Cholera as it prevailed in the United States in 1849 and 1850. Presented to both Houses of Parliament by command of her Majesty. London: 1852, 8vo., pp. 93. (From Dr. Wynne.)

On Syphilis, Constitutional and Hereditary; and on Syphilitic Eruptions. By ERASMUS WILSON, F. R. S., author of "A Treatise on Diseases of the Skin," etc. With 4 colored plates. Philadelphia: Blanchard & Lea, 1852, 8vo., pp. 284. (From the Publishers.)

The Transactions of the Third Annual Meeting of the Medical Society of the State of Georgia, held in the city of Augusta, April, 1852. Penfield: 1852, 8vo., pp. 100. (From the Society.)

Proceedings of the Medical Association of the State of Alabama, begun and held in the city of Mobile, December 10-14th, 1850. With an Appendix. Mobile: 1851, 8vo., pp. 156. (From the Association.)

The Transactions of the Illinois State Medical Society, for the year 1852. Peoria: 1852, 8vo., pp. 94. (From the Society.)

Illustrated Manual of Operative Surgery and Surgical Anatomy. By MM. CL. BERNARD, D. M. P., and CH. HUETTE. Edited, with Notes and Additions,

by Wm. H. Van Buren, M. D., and C. E. Isaacs, M. D. Illustrated with steel Engravings from Drawings after Nature, by M. J. Léveillé. Designed to serve as a companion to the ordinary text-books of Surgery. New-York and London: H. Bailliere. 1852. Part 2, 8vo., pp. 120; with 27 colored plates. (From the Publisher.)

A Practical Treatise on Diseases of the Skin. By J. Moore Neligan, M. D., M. R. I. A., Lecturer on Practice of Medicine in the Dublin School of Medicine, etc. Philadelphia: Blanchard & Lea. 1852. 12mo., pp. 333. (From the Publishers.)

The Physician's Visiting List, Diary and Book of Engagements. For 1853. Philadelphia: Lindsay & Blakiston. (From the Publishers.)

The following Journals have been received in exchange:

The American Journal of the Medical Sciences; edited by Isaac Hays, M. D.; for Oct. (Quarterly. Philadelphia.)

The American Journal of Insanity; edited by the officers of the N. Y. State Lunatic Asylum; for Oct. (Quarterly. Utica.)

The American Journal of Pharmacy; edited by Joseph Parrish, M. D., and Wm. Proctor, M. D.; for Oct. (Quarterly. Philadelphia.)

The New Jersey Medical Reporter, and Transactions of the New Jersey Medical Society; edited by Joseph Parrish, M. D.; for Sept. and Oct. (Monthly. Burlington.)

The Medical Examiner and Record of Medical Science; edited by F. G. Smith, M. D., and John B. Biddle, M. D.; for Sept. and Oct. (Monthly. Philadelphia.)

The Charleston Medical Journal and Review; edited by D. J. Cain, M. D., and F. P. Porcher, M. D.; for Sept. (Bi-monthly. Charleston.)

The New-Orleans Medical and Surgical Journal, devoted to Medicine and the Collateral Sciences; edited by A. Hester, M. D.; for Sept. (Bi-monthly. New-Orleans.)

Southern Medical and Surgical Journal; edited by L. A. Dugas, M. D.; for Sept. and Oct. (Monthly. Augusta.)

Buffalo Medical Journal and Monthly Review of Medical and Surgical Science; edited by Austin Flint, M. D.: for Sept. and October. (Monthly. Buffalo.)

The North-Western Medical and Surgical Journal; edited by W. B. Herrick, M. D., and H. A. Johnson, M. D.; for Sept. and Oct. (Monthly. Chicago and Indianapolis.)

Transylvania Medi ca Journal; edited by L. J. Frazee, M. D.; for Sept. and Oct. (Semi-monthly. Lexington.)

The Western Lancet and Hospital Reporter; edited by L. Lawson, M. D., and George Mendenhall, M. D.; for Sept. and October. (Monthly. Cincinnati.)

The New-York Medical Times; edited by H. D. BULKLY, M. D.; for Sept. and Oct. (Monthly. New-York.)

The New-York Medical Gazette; edited by D. M. REESE, M. D.; for Sept. and Oct. (Semi-monthly. New-York.)

The Boston Medical and Surgical Journal; edited by J. V. C. SMITH, M. D.; Sept. and Oct. numbers received. (Weekly. Boston.)

The Western Journal of Medicine and Surgery; edited by L. P. YANDELL, M. D., and T. S. BELL, M. D.; for Sept. and Oct. (Monthly. Louisville.)

The Ohio Medical and Surgical Journal; edited by RICHARD L. HOWARD, M. D.; for Sept. (Bi-monthly. Columbus.)

The Stethoscope and Virginia Medical Gazette; edited by P. CLAIBORNE GOOCH, M. D.; for Sept. and Oct. (Monthly. Richmond, Va.)

Nashville Journal of Medicine and Surgery; edited by W. K. BOWLING, M. D., and PAUL F. EVE, M. D.; for Sept. and Oct. (Bi-monthly. Nashville, Tenn.)

The New-Orleans Monthly Medical Register; edited by A. FORSTER AXSON, M. D.; for Sept. and Oct. (Monthly. N. O.)

Nelson's Northern Lancet and American Journal of Medical Jurisprudence; edited by HORACE NELSON, M. D.; for Sept. and October. (Monthly. Plattsburgh, N.Y.)

The New-Hampshire Journal of Medicine; edited by EDWARD H. PARKER, A. M., M. D.; for Sept. and Oct. (Monthly. Concord, N. H.)

New-York Journal of Pharmacy; edited by BEN. W. MCCREADY, M. D. No number received since July last. (Monthly. New-York.)

The Western Medico-Chirurgical Journal; edited by J. F. SANDFORD, M. D. for July and August. (Monthly. Keokuk, Iowa.)

New-Yorker Medicinische Monatsschrift. Herausgegeben und Redigirt, von Dr. J. HERZKA, Dr. E. KRACKOWIZER und W. ROTH in New-York; for Sept. and Oct. (Monthly. New-York.)

The East Tennessee Record of Medicine and Surgery; edited by FRANK A. RAMSEY, M. D.; for July. (Quarterly. Knoxville, Tenn.)

The Journal of Psychological Medicine and Mental Pathology; edited by FORBES WINSLOW, M. D.; for Oct. (Quarterly. London.)

Dublin Quarterly Journal of Medical Science; edited by ——; for Aug. (Quarterly. Dublin, Ireland.)

Dublin Medical Press; edited by ——; for Aug. and Sept. (Weekly, Dublin.)

Canada Medical Journal; edited by R. L. MCDONALD, M. D., and A. H. DAVID, M. D.; for Sept, and Oct. (Monthly. Montreal)

The Upper Canada Journal of Medical, Surgical, and Physical Science; edited by ——; for Sept. and Oct. (Monthly. Toronto.)

London Journal of Medicine; a Monthly Record of the Medical Sciences; edited by ——; for Aug. and Sept. (Monthly. London.)

Monthly Journal of Medical Science; edited by WM. ROBERTSON, M. D.; for Sept. and Oct. (Monthly. Edinburgh.)

The British and Foreign Medico-Chirurgical Review for Oct. (Quarterly. New-York Edition.)

The Retrospect of Medicine; edited by W. BRAITHWAITE; for June. (Half-Yearly. London.)

The Half-yearly Abstract of the Medical Sciences; edited by W. H. RANKING, M. D.; for June. (Half-yearly. London and Philadelphia Edition.)

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